

# GREEN LANE RESOURCES UPDATE

Information on the City of Toronto's plan to build a residential mixed waste processing facility.

Volume 1 | June 2010

## Background

### 70% diversion objective

The City of Toronto has a goal to divert 70% of waste from landfill. By achieving this goal, the City will recycle enough Blue Bin materials to save 900 million kilowatt hours of energy annually, enough to supply all the electrical needs for 170,000 homes. (Source Toronto Environment Office)

A number of initiatives are being pursued to increase waste diversion to the 70% target. In addition to improved Blue Bin and Green Bin Recycling and re-use programs, the City will need to build a waste processing facility to divert 75,000 tonnes per year of recyclable and compostable materials from the residential mixed waste stream. The interim name being used for the proposed facility is Green Lane Resources.

## Public Consultations

In September 2009, the City of Toronto hosted two open houses in the Township of Southwold to provide additional information on the proposed Green Lane Resources mixed waste processing facility.

The open houses were advertised in the local community and were well attended with over 125 people representing neighbours of the proposed site, local health units, the Green Lane Landfill Public Liaison Committee, local First Nations, the Township of Southwold Council, the Ontario Ministry of the Environment and members of the general public.

In Toronto, opportunities to comment on the Mixed Waste Processing Study were advertised in Toronto community newspapers and invitations to comment were sent to stakeholders on the study mailing list.

## Mixed Waste Processing Study

In 2008, the City commissioned a study to evaluate the best possible City-owned site and technology for Toronto to process its residential waste. Considerations included:

- ability to divert 75,000 tonnes per year from landfill;
- capital and operating costs;
- compliance with Ontario's environmental standards;
- proven operating history of the technology;
- space for the facility and existing land uses for the site and surrounding area; and
- site accessibility and servicing, including access to water, wastewater treatment and energy.

Ultimately, 12 City-owned sites were considered. The final recommendation was that the facility be located on City of Toronto owned lands, adjacent to the Green Lane Landfill\*\* in the Township of Southwold (near London, Ontario). This site met all the screening criteria, has sufficient property and has the benefit of proximity to the landfill.

The study also evaluated five technologies. Mechanical biological treatment (MBT), with anaerobic digestion\*\* was found to be the best option for the new facility.

*Study is available at [toronto.ca/garbage/mwp](http://toronto.ca/garbage/mwp)*

*\*\* Definition provided in separate section.*

## Health Impact Assessment (HIA)\*\*

In March 2010, representatives from Chippewas of the Thames First Nation, Oneida Nation of the Thames, Elgin-St. Thomas Public Health Unit, Middlesex-London Health Unit, Green Lane Landfill Public Liaison Committee and the Township of Southwold participated in a workshop designed to obtain a better understanding of any potential health concerns that the community around the Green Lane Landfill site might have with the proposed waste processing facility. The Ontario Ministry of the Environment attended the workshop as an observer.

Participants discussed concerns including odour, air quality and truck traffic. Positive impacts were also identified and included education of school children about the benefits of recycling, an increase to the Green Lane Community Trust Fund\*\*, potential employment opportunities and possible joint recycling initiatives for local municipalities with the City of Toronto.

The input from the workshop will be used to assess strategies and measures that can be incorporated into the facility design that would lessen potential negative impacts. A report is posted on the project website.

### What We Heard

The table below summarizes comments received through consultations with the various stakeholders. These will be taken into consideration during the Request for Proposal stage and during the design of the facility.

Themes	Comments	Project Team Response
<b>Technology &amp; site screening</b>	<p>General agreement that the criteria used to select the preferred technology and site was comprehensive.</p> <p>Anaerobic digestion was viewed as preferable to aerobic composting**, although some were concerned with the reliability of the preferred technology and the value of the end product (compost-like-output)**.</p> <p>Comments also suggested that incineration and energy from waste technologies should have been evaluated.</p>	<p>The Mixed Waste Processing Study recommends mechanical biological treatment (MBT), with anaerobic digestion as the preferred technology. Compost is one of the outputs from the MBT process and the production and quality of compost is governed by the Ministry of the Environment (MOE). The final uses for the compost will depend on product quality.</p> <p>Energy from waste, including incineration technologies are not considered waste diversion as part of the MOE's policies.</p>
<b>Site selection</b>	<p>Many agreed that the preferred site seemed the most suitable for the proposed facility. Some felt that sites other than the lands adjacent to the Green Lane Landfill should be adequately investigated.</p>	<p>Only sites currently owned by the City of Toronto, either within or outside City boundaries, and that can obtain Ontario Ministry of the Environment approvals were evaluated. Nine sites were within the City of Toronto (transfer stations and closed landfills) and three current and former landfill sites outside of Toronto were also reviewed. The Mixed Waste Processing Study found the only site that was suitable for the development of a mixed waste processing facility was the Green Lane Landfill.</p>
<b>Truck traffic &amp; transportation</b>	<p>Distance from the source of the waste to the processing facility, emissions, costs and transportation logistics were raised as concerns. Several comments were also made about the need to upgrade roads in the area near the facility and the exit ramp from Hwy. 401 leading to the facility.</p>	<p>A traffic assessment was completed and determined that traffic flow changes did not require or justify any local road upgrades beyond the reconstruction of the road from the landfill entrance to the new mixed waste processing facility entrance.</p>



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<b>Odour &amp; noise</b>	Odours from the proposed new facility need to be effectively controlled and processing, curing and stockpiling of compost should be completely enclosed and indoors.	Measures to lessen the impact of odour and noise will be part of the final design.
<b>Environmental impacts</b>	A new facility would add more pollution to the area including surface water contamination and leachate from the facility and compost.	Reducing potential environmental impacts will be given priority during the design phase of the new facility. The design and operations of the facility will include on-site water and wastewater re-use. Facility approvals and detailed design will also include a local surface water assessment with recommendations for engineered facilities.
<b>Local benefits &amp; property values</b>	<p>Extend offers of employment to the local community and allow the Township of Southwold to use the new facility to help increase its diversion rates.</p> <p>Residents requested assurance that private property values are not negatively affected over the life of the facility. Others suggested that the new facility must have its own property value protection plan that would be a 2km – 5km radius from the boundaries of the new facility.</p>	These concerns will be taken into consideration during the Request for Proposal stage, the detailed design and the environmental approvals process for the new facility.
<b>Public consultation</b>	Many people appreciated being invited to comment or attend open houses in the local community where the facility is being proposed. Interested public suggested that they would like to be kept informed about this project through newsletters and public events.	The City of Toronto will continue to keep residents and other stakeholders informed throughout the process.
<b>General comments</b>	<ul style="list-style-type: none"> <li>• Employees of the new facility should be public sector employees.</li> <li>• Set up a Public Liaison Committee to discuss the operation and impacts of the new facility.</li> <li>• Process multi-residential waste at the new facility, since diversion rates are low in Toronto buildings.</li> </ul>	<p>These will be taken into consideration throughout the design and planning for the new facility.</p> <p>A Public Liaison Committee for Green Lane Resources will be set up once the facility is operating.</p>



*Conceptual drawing of proposed facility.*

## Timeline

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|--------------------------------------|---|
| <b>July 2009</b>                     | <ul style="list-style-type: none"> <li>Life Cycle Assessment (LCA) and the Health Impact Assessment (HIA) screening finalized</li> </ul>  |
| <b>August 2009</b>                   | <ul style="list-style-type: none"> <li>Mixed Waste Processing Study completed</li> </ul>  |
| <b>September 2009 - January 2010</b> | <ul style="list-style-type: none"> <li>Consultation with the community and interested stakeholders</li> <li>Public comments received</li> </ul>   |
| <b>January 2010 - March 2010</b>     | <ul style="list-style-type: none"> <li>Request for Pre-Qualification (RFPQ) issued and received to solicit vendors interested in providing the selected technology</li> <li>Issued Request for Interest and evaluated technology submissions</li> </ul> |

## Next Steps

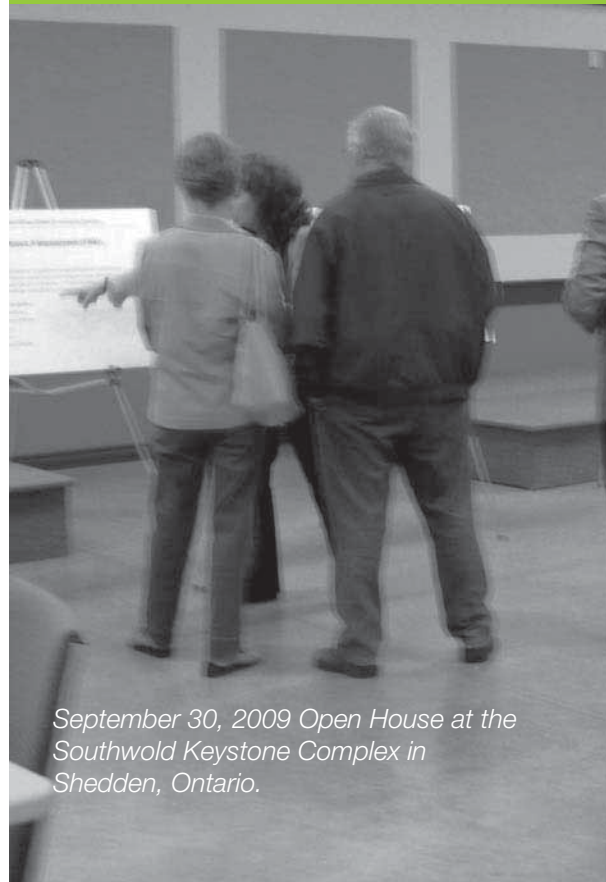
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|------------------|---|
| <b>late 2010</b> | <ul style="list-style-type: none"> <li>Issue Request for Proposals to pre-qualified respondents</li> </ul>  |
| <b>mid 2011</b>  | <ul style="list-style-type: none"> <li>Recommendation report to Toronto Public Works and Infrastructure Committee and Toronto City Council</li> </ul> |
| <b>mid 2011</b>  | <ul style="list-style-type: none"> <li>Request approval from Toronto City Council</li> </ul>  |
| <b>late 2011</b> | <ul style="list-style-type: none"> <li>Begin construction, if approved</li> </ul>   |

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**Visit:**  
[toronto.ca/garbage/mwp](http://toronto.ca/garbage/mwp)

**Contact us:**  
[mwp@toronto.ca](mailto:mwp@toronto.ca)  
**Toll free: 1-800-465-4056**  
**Fax: 416-392-2974**  
**TTY: 416-397-0831**

**Residual Waste Working Group (RWWG)** is a City of Toronto citizen advisory group comprised of eight members that was formed to assist the City in reaching 70% waste diversion goal. The working group collaborates with staff to help find a solution to manage Toronto's residual waste, with the current focus on Green Lane Resources. Follow the work of the RWWG at:  
[toronto.ca/garbage/rwwg](http://toronto.ca/garbage/rwwg)



*September 30, 2009 Open House at the Southwold Keystone Complex in Shedden, Ontario.*

# You Asked Us

## **What does the City of Toronto currently do with its garbage?**

The City of Toronto currently has a disposal contract with Republic Services Inc. that continues to the end of 2010. The majority of Toronto's waste is hauled to Carlton Farms Landfill site located in Michigan.

Toronto's waste disposal contract with Republic at Carlton Farms Landfill was never intended to be long-term and in 2007 the City purchased the Green Lane Landfill in the Township of Southwold, Ontario. In January 2011, residential mixed waste from Toronto will be sent to the Green Lane Landfill.

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## **What is Mixed Residential Waste?**

Mixed Residential Waste is the portion of waste remaining after residents separate materials for recycling and composting. Mixed waste also includes materials that have not been properly separated and are incorrectly placed in the garbage.

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## **What will the new facility do?**

The proposed Green Lane Resources facility will recover any recyclables and organics that remain in the waste and generate compost-like-output to ultimately reduce the amount of material going to landfill.

The biogas produced from the facility will be rich in methane, and is a source of renewable energy. The methane may offset the facility's own energy requirements.

Once Green Lane Resources is built, approximately 15 truck loads per day will be processed at the facility and only the non-recyclable and non-compostable materials will be sent to landfill.

The facility will be developed and operated to process approximately 150,000 tonnes per year of waste and is projected to result in 75,000 tonnes per year of diversion.

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## **What does this mean for Toronto residents?**

Toronto residents do not need to do anything differently. It will still be important to separate recyclable material, organics and garbage as always. The new facility will only change how material is processed, and it will help to keep more waste out of landfill.

# Definitions\*\*

**Aerobic Composting:** A controlled microbiological process in the presence of oxygen that decomposes organic matter into carbon dioxide, water, minerals and stabilized organic matter.

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**Anaerobic Digestion (AD):** A process of biologically degrading materials in the absence of oxygen. This produces a 'biogas' which is rich in methane (CH<sub>4</sub>) and can be used to generate energy for uses such as electrical power generation.

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**Compost-Like-Output (CLO):** Following mechanical screening and biological treatment, Mechanical Biological Treatment (MBT) processes can produce a range of organic materials for potential 'compost' applications. However, due to the variability of the mixed waste feedstock, and the quality of the materials produced following MBT processing and curing, these materials are considered CLOs rather than compost materials.

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**Green Lane Community Trust Fund:** The Green Lane Community Trust Fund pays benefits to communities in the vicinity of the Green Lane landfill site: Township of Southwold, County of Elgin and the City of St. Thomas.

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**Green Lane Landfill:** In April 2007, the City of Toronto acquired the Green Lane Landfill, securing long term disposal requirements for future decades. Over the years, the Green Lane Landfill site has evolved from a small waste disposal operation to a state-of-the-art facility with landfill gas systems, stormwater management systems, leachate management systems, naturalized areas and buffer lands. Beginning in January 2011 all of the City of Toronto's residential waste will be disposed of at the Green Lane Landfill.

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**Health Impact Assessment (HIA):** A Health Impact Assessment screening tool assesses or predicts the potential health effects of a project or policy, to inform or influence the decision-making process and to determine ways to lessen any possible health consequences of a decision.

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**Mechanical Biological Treatment (MBT):** MBT is a generic term for a range of processes that may be used to treat residential mixed waste using a combination of mechanical separation and biological treatment. This commonly comprises three stages: mechanical size reduction, biological drying (reducing moisture content) and material separation to segregate different output streams for different purposes.