



2011

# Toronto Environment Office



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## Summary of Programs & Activities

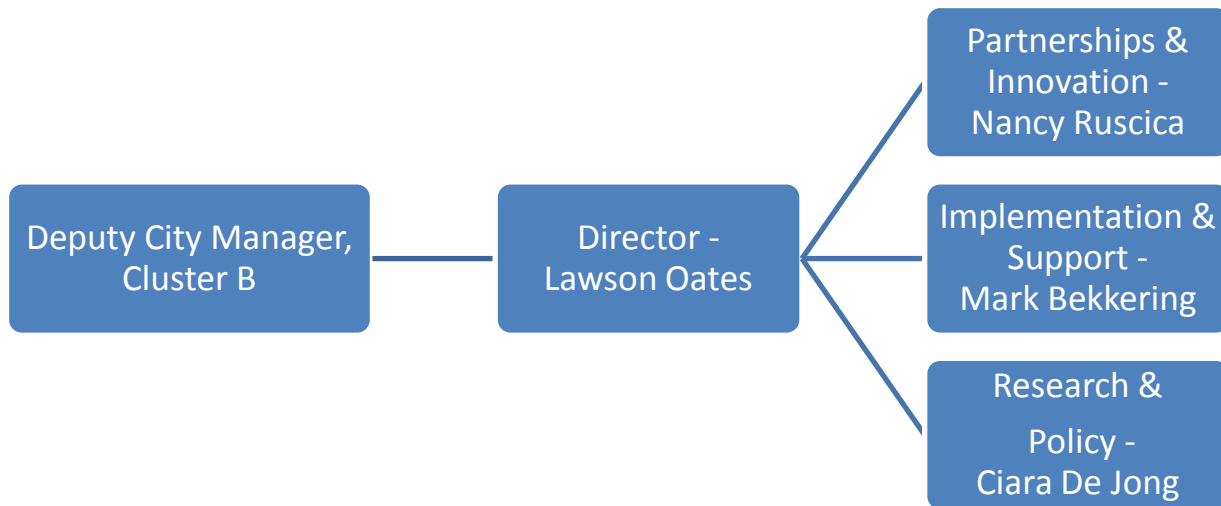
## THE TORONTO ENVIRONMENT OFFICE

### Mission

The Toronto Environment Office "TEO" serves the community and the corporation in addressing environmental issues of concern by:

- providing research and policy expertise;
- establishing effective policy and program partnerships between external and internal stakeholders; and
- delivering the tools needed to support residents and businesses in making changes to contribute to greener lifestyles and business practices.

### Organizational Structure



Total Staff Complement in 2011: 26 approved positions (3 vacant)

2011 Budget: \$11.6 million (\$3.3 million net)

## Achievements

- Close to 80% of the recommendations adopted by City Council in July 2007 as part of the **Climate Change Action Plan** are complete, with the recommended policies, programs and actions taken and established.
- Work has been initiated on all of the recommendations adopted by City Council in November 2009 as part of the **Power to Live Green: Toronto's Sustainable Energy Strategy** with reports to City Council planned for 2011.
- Close to 15,000 households in Toronto participated in the **Home Energy Assistance Toronto** program making their homes more energy efficient, helping directly create 115 person years of employment and reducing greenhouse gas emissions by an estimated 38,000 tonnes.
- The first major **corporate sponsorship** for the Live Green Toronto initiative involving a commitment of \$400,000 over two years from Canadian Tire was established in 2010.
- In partnership with Canadian Tire, the **Cut-it Out** program has seen almost 2,000 older, high polluting lawn mowers & other small engine equipment retired from use by residents.
- The **Smart Commute Program** continued to grow with the addition of new companies bringing the number of employees being supported in using alternative modes of transportation to over 90,000.
- The **Live Green Toronto** initiative through the activities of the Community Animators, the provision of the one stop Live Green Toronto web-site, and participation in community events and festivals (e.g. CNE, Canada Blooms, Home Show, Green Living Show) is estimated to have reached over 350,000 residents.
- More than 35,000 residents and 100 local businesses and agencies participated in the **Live Green Toronto Festival** at Yonge-Dundas Square.
- In collaboration with Parks, Forestry & Recreation led the City's contribution to **Canada Blooms 2010**, with a feature garden focused on urban agriculture. This exhibition engaged City operations and a number of community based organizations and won four awards.
- **The Live Green Toronto Membership Card** program, launched in October 2010, already has 10,000 residents and 250 local businesses participating.
- In October 2010, the TEO, Toronto Hydro and Enbridge Gas launched **Home Energy Help** an innovative partnership program designed to assist low income home owners in making their property more energy efficient.
- Established with **Landscape Ontario** a partnership to design and deliver a training program for Landscapers on how to reduce the use of small engine lawn and garden equipment and their associated emissions.
- Supported key City Divisions in the implementation of the **Local Food Procurement Policy** by working to identify & implement new business processes.

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- Received and evaluated close to 300 applications for the **Live Green Toronto Community Investment Fund** and the **Eco-Roof Financial Incentive**. Over 140 community led environmental initiatives were supported by these programs.
- Prepared a **Climate Change Risk Assessment** methodology that is now being utilized by City operations to identify and plan for environmental risks and financial costs associated with the changes that are occurring in the climate.
- Completed the **Extreme Weather Events Research Study** which identifies the critical trends in weather events (e.g. intense rain storms) occurring as a result of climate change & that have major economic, social & environmental impacts.
- Completed the first detailed **Local (neighbourhood level) Air Quality Study** which determined the local sources of air pollution & is being utilized to work with the residents on taking local action to improve their air quality.
- Monitored & coordinated the preparation of the City's position & concerns associated with emerging Provincial environmental legislation & regulations.
- Organized the seventh Annual **Green Toronto Awards**, held in April 2011.
- Managed the Live Green Toronto **Environmental Volunteers**, which now has more than 1,200 registered volunteers providing more than 5,500 hours of time per year to support of the City's environmental initiatives.

### Key Programs & Initiatives

The Toronto Environment Office is engaged in initiatives that support residents and businesses in improving the natural environment, enhancing employment and economic opportunities and helping address social issues of concern. The following pages provide an overview of the current major programs and projects of the TEO.

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## 1. PARTNERSHIPS & INNOVATION

### 1a. Live Green Toronto Membership Card

The Live Green Toronto Membership Card is available at no charge to people who live, work, and shop in the City of Toronto. The membership card program encourages residents and businesses who want to do something right now to make Toronto an even greener city by bringing them together.

The Live Green Toronto Membership Card works to educate shoppers about environmentally friendly alternatives; create valuable connections between cardholders and businesses; and provide a competitive advantage to Toronto businesses.



Business members benefit from extensive promotion and connect with thousands of new and loyal customers. Each business member receives a dedicated page on the website and there is no cost to participate for businesses or shoppers.

Our Audience:

- Currently close to 10,000 active members from across the GTA
- Over 250 businesses on board

Participating businesses include:

- Toronto Raptors;
- Steam Whistle Brewery;
- Royal Lighting;
- Green Homes Ltd;
- Tuff Recycling;
- Modrobes; and
- Include restaurants; clothing stores; contractors; retailers; and more.

For more information, including how to join, visit:

<http://www.livegreencard.ca/>

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## 1b. Live Green Toronto Business Workshops & Speakers Series

In 2010, TEO and the Toronto office of Green Enterprise Ontario (GEO) developed two new programs to help Toronto businesses gain a competitive advantage by going green. The first was a series of one-day workshops to help businesses create an environmental management system based on ISO 14001 and the second was a Breakfast Speaker Series featuring a wide range of experts in the fields of energy efficiency, clean technology, green buildings and sustainable design.

The ISO 14001 workshops helped participants create a customized environmental management system to:

- Identify and control the environmental impacts of their business activities, products and services;
- Help them set efficiency objectives and track results;
- Help them continually improve their environmental performance; and
- Allow them to self declare their business as ISO 14001 compliant and use the ISO 14001 Self Declared logo in their marketing and promotional materials.

For 2011, in partnership with the Economic Development & Culture Division and Green Enterprise Ontario, TEO is developing the "**Green Your Business**" workshops. These workshops are sector specific (i.e. restaurant, retail, etc.) half-day sessions aimed at helping Toronto businesses improve their operations and save money.

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## 1c. Green Toronto Awards

The annual Green Toronto Awards honour and celebrate the individuals, organizations and companies leading the way to a cleaner, greener and more liveable Toronto. Since 2005, dozens of businesses have been recognized for their achievements including Beach Solar Laundromat, Tridel, Bullfrog Power, Unilever, Campbell Canada, SAS Canada, Steam Whistle Brewing and many more. New for 2011 is the addition of the Green Business Award.

The Green Toronto Awards are proudly co-presented by the City of Toronto and Green Living Enterprises and made possible by the generous contributions of sponsors such as Loblaw Companies, TD Friends of the Environment Foundation, Enbridge, Toronto Hydro and more.

### **Further Information**

[www.toronto.ca/greentorontoawards](http://www.toronto.ca/greentorontoawards)

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## 1d. Green Innovation Awards

The Toronto Community Foundation and the City of Toronto teamed up to help aspiring Toronto-based entrepreneurs turn their green ideas into action.

Up to \$50,000 in seed money was available to support new products and/or services that demonstrate significant potential for market success and having a positive environmental impact in Toronto.

In 2010, from a list of 127 submissions, 10 finalists were selected to face the judges. The judging panel consisted of a number of Toronto Community Foundation fundholders representing a variety of related backgrounds, from venture capital to engineering and from eco-entrepreneurs to technologies.

Three winners of the inaugural Green Innovation Awards were announced: Olivier Trescases, Ph.D. and Chris Lea, representing their idea Green Gym: Harvesting Energy from Exercise Equipment; Sarah Lazarovic, for her idea GreenHouseTO; and Robert Kori Golding, for his idea My Green City.



For more information:

[http://www.toronto.ca/livegreen/greenleaders\\_innovationawards.htm](http://www.toronto.ca/livegreen/greenleaders_innovationawards.htm)

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## 1e. Live Green Toronto Festival

Toronto's largest outdoor green festival brings hundreds of green products and services, live music, a farmers' market, buskers, a kids' zone and more to the streets of Toronto every year!



More than 35,000 Torontonians joined us at the 2010 Festival (5<sup>th</sup> Annual) which featured over 100 exhibitors of green products and services and musical performances including Steven Page, Colin James and Divine Brown. The 6<sup>th</sup> Annual Festival is scheduled for July 16, 2011 at Yonge-Dundas Square.

The 2011 Festival is supported by generous sponsors including main stage sponsor Canadian Tire, as well as GoodLife Fitness, ZipCar, Bullfrog Power, Hard Rock Café, Delta Chelsea Hotel, Green Living Enterprises & The Body Shop.

For more information, visit: [www.toronto.ca/greentorontofestival](http://www.toronto.ca/greentorontofestival)



Crowds at the Main Stage



Yonge St. Market



The Toy Space Inc.  
Educational & environmentally friendly toys



Nadurra Wood Corp.  
Eco-wood flooring, cabinets & more

## 1f. Live Green Toronto Volunteers

### Live Green Toronto Volunteers Make a Difference!

Live Green Toronto Volunteers are dedicated individuals who help bring the City of Toronto's environmental programs and services to the public through education and outreach. Comprised of over 1,200 individuals, speaking over 47 different languages, the volunteers engage thousands of people each year, at over 175 events, all across Toronto, helping residents green their lives. In 2010, it is estimated that the Live Green Toronto Volunteers provided 5,500 hours of service in support of the City's environmental initiatives.

Volunteers gain a broad understanding of various environmental topics that affect the City of Toronto including solid waste management, water efficiency, energy efficiency, sustainable transportation, pesticide reduction, organic lawn and garden care, urban forestry and local food issues. These experiences and training provide valuable skills which enhance the participants' opportunities for employment in the green economy.

For more information, visit:

[www.toronto.ca/livegreen/getinvolved\\_volunteer.htm](http://www.toronto.ca/livegreen/getinvolved_volunteer.htm)



Volunteers in Action at the Live Green Toronto Festival, 2010

## 1g. Community Events & Shows

During the year the Toronto Environment Office carries the Live Green Toronto and other key environmental messages to the community by participating and coordinating all City ABCC&D involvement in a large number of community events and trade shows. By participating in these events it is estimated that the City reaches about 350,000 people a year.

Events that TEO staff will be participating in and/or coordinating the City's participation in 2011 are:

- Toronto Home Show;
- Canada Blooms;
- Green Living Show;
- Earth Hour;
- 44 Community Environment Days;
- Toronto Hydro Day;
- Nuit Blanche;
- Canada Day; and
- CNE.



City of Toronto's Environmental Information Centre  
Green Living Show, 2010

At major shows the City's pavilion has been recognized for its creativity and design. For example, at Canada Blooms in 2010 the Live Green Toronto urban agriculture themed exhibition won four awards, including design for accessibility.

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## 1h. Live Green Toronto Website

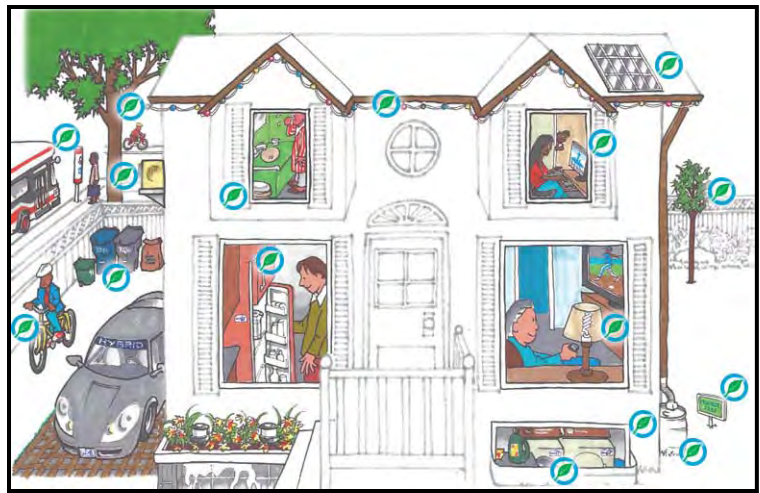
A number of programs and resources delivered by City, Provincial and Federal Governments and Community Foundations are available to residents and businesses take action to improve our environment.

The Live Green Toronto initiative makes it easier for people to find information and resources by providing one-window access. This is done in a number of ways, such as through participation in events (see item 1g above), by providing the Community Animators (see item 2k below) and by making it easy for people to find information through the Live Green Toronto website ([www.livegreentoronto.ca](http://www.livegreentoronto.ca)).

Live Green Toronto's website is the one-window, one-stop site for accessing all programs, incentives and resources available to residents and businesses.

The comprehensive Live Green Toronto website includes content to help people:

- Green Your Life;
- Green Your Neighbourhood;
- Green Kids and Schools;
- Green Your Business;
- Find Environmental Events and Activities;
- Volunteer;
- Access Grants and other financial incentives, and more.



Green Your Home page from the Live Green Toronto website

The Live Green Toronto website, launched in May 2008, receives an average of 8,000 visits per month.

[Livegreentoronto.ca](http://Livegreentoronto.ca)

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## 1i. Live Green Toronto Community Grants

At its meeting of May 26 & 27, 2008 Toronto City Council authorized the establishment of the Live Green Toronto Community Investment program (see agenda item EX20.5) as part of the larger Live Green Toronto initiative. This is a five-year initiative established to support neighbourhoods and community groups in taking local community action to improve their local natural environment.

The Live Green Toronto Community Grants program initiative is designed to support residents, businesses, neighbourhoods and community groups in taking local action on climate change. Since the Fall of 2008, over 245 applications for a Live Green Toronto grant have been received and over 70 applications have been awarded funding. Initiatives supported by the Grants include tree plantings, home energy audits, solar energy collective purchases and urban agriculture.

As of March 31, 2011 a total of 31 funded projects were complete. A total of just under \$1 million was granted to these 31 completed projects. These funds were utilized to leverage additional project funding of just over \$8.8 million, which means that for every dollar invested by the City, an additional \$9 was obtained and invested in these community led initiatives.

The following summarizes the environmental outcomes of the 31 completed projects:

- 30,000 kg of greenhouse gas emissions avoided;
- 2,170 trees planted;
- 12,150 square meters of green space created (including community gardens);
- 14 community gardens created;
- 13,757 kg of produce harvested;
- 5,694 kg of waste diverted;
- 5,250 kg of trash picked;
- 11,154 kg of compost produced;
- 356 solar assessments conducted;
- 33 solar installations with a total capacity of approximately 25kW;
- 118 home energy audits conducted;
- One GUS2 Vertical Axis Wind Turbine (1EL) installed;
- 718 volunteers trained/engaged;
- 221 events with a total attendance of approximately 75,000; and
- 224 workshops hosted with approximately 2,800 participants.

For more information:

[http://www.toronto.ca/livegreen/greenneighbourhood\\_rebates\\_cip.htm](http://www.toronto.ca/livegreen/greenneighbourhood_rebates_cip.htm)  
[http://www.toronto.ca/livegreen/greenneighbourhood\\_rebates\\_cpf.htm](http://www.toronto.ca/livegreen/greenneighbourhood_rebates_cpf.htm)

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## **1j. Community Program for Storm Water Management & ChemTRAC**

The TEO on behalf of Toronto Water and Toronto Public Health administers two grant programs. The Community Program for Storm Water Management (CPSWM) is funded by Toronto Water and provides grants to community groups engaged in actions to reduce storm water run-off. ChemTRAC is funded by Toronto Public Health and provides grants to organizations working with local businesses in finding ways to reduce and eliminate the use of priority toxic chemicals that can be released into the environment.

By engaging with the TEO to administer these grant programs, administrative efficiencies were established and costs reduced for delivery of the programs, ensuring all funds allocated are being granted to the community.

For more information:

[http://www.toronto.ca/livegreen/greenneighbourhood\\_rebates\\_cpswm.htm](http://www.toronto.ca/livegreen/greenneighbourhood_rebates_cpswm.htm)

[http://www.toronto.ca/livegreen/greenneighbourhood\\_rebates\\_chemtrac.htm](http://www.toronto.ca/livegreen/greenneighbourhood_rebates_chemtrac.htm)

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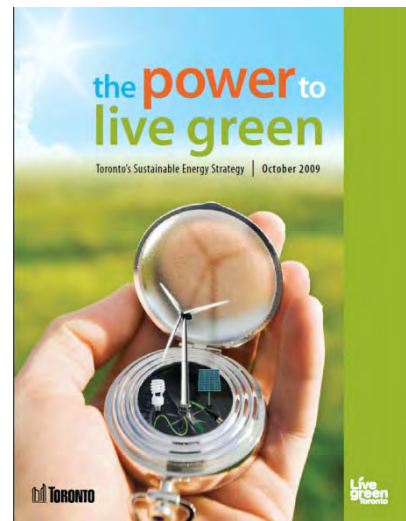
## 2. IMPLEMENTATION & SUPPORT

### 2a. Strategic Plans & Policy

In 2007, the TEO was responsible for preparing and presenting to City Council the "**Climate Change, Clean Air and Sustainable Energy Action Plan**" (Climate Change Action Plan). This strategy established the greenhouse gas and smog causing pollutants reduction targets for Toronto and identified 64 consolidated recommendations for helping achieve those targets. The targets and recommendations were unanimously adopted by City Council in July 2007.



In 2009, building upon the successful implementation of the Climate Change Action Plan which focused on energy use in buildings and other stationary uses of energy, the TEO developed the "**Power to Live Green: Toronto's Sustainable Energy Strategy**". Developed in partnership with Toronto Hydro and adopted by City Council in November 2009, this strategy built upon the recommendations of the Climate Change Action Plan and established specific targets for energy conservation and renewable energy generation that would move the community towards the greenhouse gas and smog causing pollutant reduction targets.



In 2011, the TEO will present the second implementation status report to City Council identifying the status of implementation of all the recommendations included in the two strategies: the Climate Change Action Plan and the Power to Live Green. Preliminary results indicate that almost 80% of the recommendations from the Climate Change Action Plan have been implemented and the recommended policies and programs have been established and currently operating. The remaining 20% have been superseded by changes in Provincial legislation or other factors. With respect to the Power to Live Green, efforts have been initiated on all the recommendations and a number of follow-up reports are planned for presentation to City Council during 2011.

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## 2b. Local Food Procurement Policy

In October 2008 (item GM18.4), City Staff were directed by City Council work on the development of an implementation plan that would see them procuring at least 50% of the food used in City operations from local (Ontario) food producers. Since that time, TEO Staff have been working closely with staff in the following City operations:

- Children's Services;
- Long Term Care Homes and Services;
- Parks, Forestry and Recreation;
- Real Estate Services; and
- Shelter, Support and Housing Administration.

In the fall of 2010, TEO engaged a consultant to work with the core City Divisions to identify what business practice changes may be required to achieve the 50% target. A report documenting the implementation plans of the five Divisions and the associated implications is scheduled to be presented to the Government Management Committee in 2011.

More recently, the GreenBelt Foundation awarded the TEO a grant of \$225,000 to provide financial support for the work of the City in local food procurement. About \$75,000 of these funds will be utilized to support the work currently underway to develop the implementation plan with the remainder allocated to support the actions identified in the implementation plan.

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## 2c. Small Engine Lawn & Garden Equipment / Cut-it Out Toronto

In response to actions adopted as part of the Climate Change Action Plan, TEO presented to City Council in May, 2009 a report on reducing the use of small engine equipment in both City operations and the broader community (item EX32.6). Adoption of that report led to the:

- initiation of actions that accelerated the replacement of over 800 pieces of older high polluting equipment in City operations;
- development in 2010/11 in partnership with Landscape Ontario of a training program for Landscapers on the proper use and maintenance of small engine equipment; and
- establishment of the **Cut-it Out Toronto** program to encourage residents to retire older high polluting small engine equipment. In 2009, as a pilot program delivered at only 12 Community Environment Days, residents brought in 171 pieces of equipment. In 2010, Canadian Tire as part of its two-year sponsorship of the Live Green Toronto initiative offered financial incentives to residents who bring in equipment. A total of 1,328 pieces of equipment were retired from use by residents in 2010. All equipment collected was sent for recycling.



In 2011, Cut It Out will take place on June 4 and 5 at four Canadian Tire stores in Toronto. Canadian Tire will offer discounts on push mowers and other low emission lawn mowers to those who bring in older higher polluting equipment for recycling.

For more information:

[http://www.toronto.ca/environment\\_days/cutitout.htm](http://www.toronto.ca/environment_days/cutitout.htm)

## 2d. Electric Vehicles

Motor vehicles are the source of approximately one-third of Toronto's total greenhouse gas emissions.

In November 2009, City Council approved *The Power to Live Green: Toronto's Sustainable Energy Strategy*. This strategy features a series of recommendations, including a call to explore how electric vehicles can fit into Toronto's broader sustainable transportation plan.



Electric vehicles, which have no emissions from their tailpipe, generate less local greenhouse gas and smog-causing emissions than traditional vehicles.

Before the City can advance the widespread use of electric vehicles, there are a variety of things to consider – from the number and location of charging stations, to the impact on our electricity grid and ways to support EV-friendly policies. In mid-2010 the City's Electric Vehicle Working Group was established to look into these issues. Co-chaired by the Toronto Environment Office and the Toronto Atmospheric Fund, and comprised of staff from key City Divisions and Agencies (e.g. Toronto Hydro, Toronto Parking Authority, Transportation Services), the working group will be reporting to City Council in 2011. The Group is also considering ways to encourage residents and businesses to purchase electric vehicles, including incentives, designated lanes and preferred parking.

For more information:

[http://www.toronto.ca/environment/transportation\\_ev.htm](http://www.toronto.ca/environment/transportation_ev.htm)

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## 2e. Carbon Credit Policy

In September, 2005 City Council adopted a policy that the City of Toronto will only sell offset credits to the Government of Canada Climate Fund on the condition that the offset credits be retired by the Federal Government.

A lot has changed since adoption of that policy and the existing policy requires updating to accommodate the current and emerging situations for carbon credits. For example, the Canada Climate Fund no longer exists, while it is expected that by the end of 2011 or in early 2012 the Province will announce a formal cap and trade system and regulation.

In late 2009, the TEO, at the direction of the City Manager, established an inter-departmental team for the purposes of:

- Identifying and quantifying all carbon reduction emission credits that have been achieved by the City;
- Clarifying legal ownership of the carbon credits;
- Publishing all of the City's owned carbon credits; and
- Evaluating the existing carbon credit policy and making recommendations for revising that policy.

In 2011 the conclusions and recommendations of the working group will be ready for presentation to City Council.

## 2f. Industrial Work Group & Green Jobs Action Team

In partnership with the Economic Development and Culture Division the TEO has established two inter-divisional/agency work groups that are working on the development of collaborative programming that supports local businesses and industries in going green. The first group, "The Industrial Work Group", involves the City, Toronto Hydro, Enbridge Gas & the TRCA in the development of one-stop collaborative programming to support small- to medium-sized industries in becoming more energy and water efficient and thereby more economically competitive.

The second group, "The Green Jobs Action Team", is conducting research into what are the emerging jobs and skills associated with a green economy and ensuring appropriate actions are taken to fill any job development and training needs.

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## 2g. Smart Commute

Smart Commute is a Municipal-Provincial-Non-Governmental Organization program that works with Toronto businesses to encourage shifts in employee commutes from single occupancy vehicles to carpooling, public transportation, cycling, walking, and teleworking. Almost 50% of the program costs are covered by Metrolinx. Currently TEO is working directly with 19 major downtown employers & property managers with over 90,000 employees (e.g. Manulife, Brookfield Properties, CBC, University Health Network, Oxford Properties and Liberty Village BIA). An additional nine employers are currently evaluating participating in the program.



In addition, the City through the Toronto Environment Office provides financial support for the Airport Smart Commute program focused on businesses surrounding the Pearson Airport & the North Toronto-Vaughan Smart Commute program which works with large employers in the York University area and in the Consumer's Road employment area. TEO is also in the process of completing a feasibility study evaluating the possibility of expanding the Smart Commute services to employers in Scarborough.

### Key Outcomes

It is estimated by Metrolinx that the net impact of all the Smart Commute programs in the GTA is a reduction of over 16 million vehicle kilometres travelled in the GTA. The Smart Commute program helps reduce traffic volumes during rush hour thereby reducing congestion and associated smog emissions.

Amongst the participating downtown employers and property managers, some of the actions taken and supported by the Smart Commute program include:

- Provision of discounted transit passes to employees;
- Creation of preferential employee parking spots for car pools;
- Reduction in employer paid parking for employees; and
- Development of bike parking & other associated facilities.

For more information:

<http://www.smartcommutetoronto.ca/>

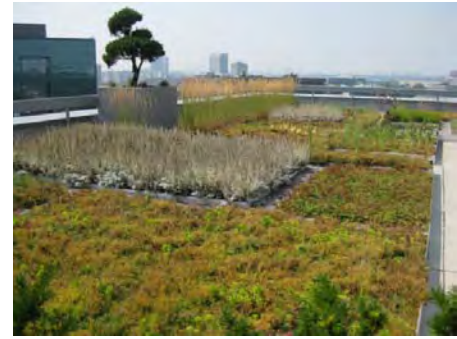
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## 2h. Eco-Roof Financial Incentive Program

Provides to owners of existing institutional, commercial, and industrial buildings (ICIs) and certain new ICI buildings a \$50/square metre subsidy for a green roof up to 50% of the cost (maximum of \$100,000), or \$2-5/square metre subsidy for a cool roof, up to 50% of the cost (maximum of \$50,000).

### Key Outcomes

Green Roofs help reduce operational costs to Toronto Water to treat storm water that is retained by the eco-roof. Green and cool roofs also help reduce the Urban Heat Island effect that occurs during summer heat waves as green roofs help to cool the local air as a result of the cooling effect that takes place when water is evaporated. Cool roofs reflect sunlight back into the atmosphere and negate its warming effect resulting in reduced demand for air conditioning.



Green Roof at ESRI Canada Ltd.  
12 Concorde Place

In 2009 and 2010, 82 Eco-Roof applications were received, 72 of which were approved for funding. A total of just over 131,000 square meters of green and cool roofs have been approved for funding.

Of these 72 projects it is estimated that:

- Green roofs reduced energy consumption on average by 11kWh per square meter a year, helping avoid on average 31 tonnes of greenhouse gas emissions annually;
- The combined green roofs divert between 7 to 8 million litres of stormwater from storm sewers annually; and
- Cool roof installations reduced energy consumption on average by 1.72 kWh per square metre a year, helping avoid on average 38 tonnes of greenhouse gas emissions annually.

A few of the companies and organizations that have participated in this program are: Cliffcrest Plaza Ltd.; Brookfield Properties; Con-Tech Restoration; Monarch Group; University of Toronto; Crescent Town Community Health Centre; ESRI Canada; & York Manufacturing Services.

For more information:

[http://www.toronto.ca/livegreen/greenbusiness\\_greenroofs\\_eco-roof.htm](http://www.toronto.ca/livegreen/greenbusiness_greenroofs_eco-roof.htm)

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## 2i. Home Energy Assistance Toronto (HEAT)

This program provides financial assistance (up to a maximum of \$1,000 per home) to support homeowners in upgrading the energy efficiency in their homes and accessing an additional \$7,750 in Federal and Provincial rebates.

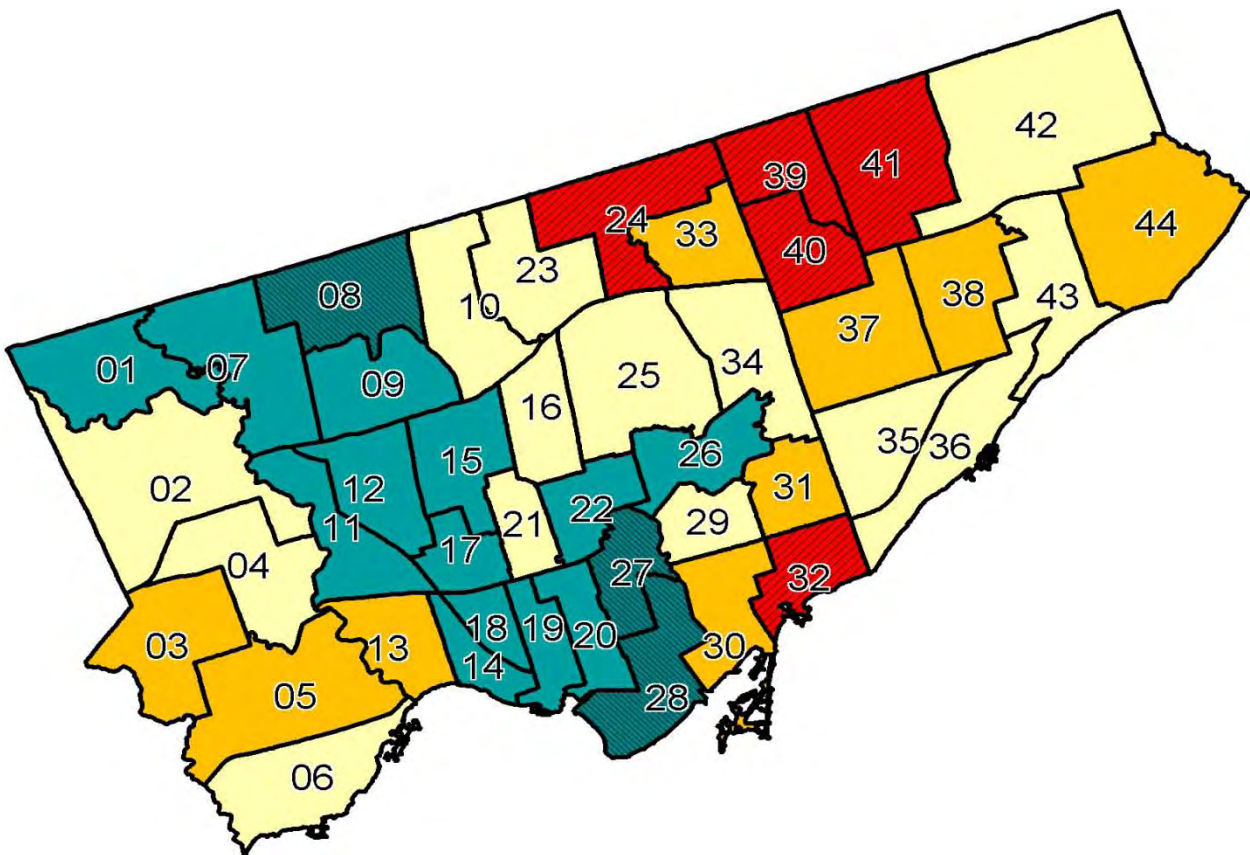
### Key Outcomes

In August 2009, City Council adopted a report (item EX33.34) establishing the Home Energy Assistance Toronto (HEAT) program and the provision of grants of up to a maximum of \$1,000 in support of homeowners upgrading the insulation in their homes. This initiative helps residents save money on their utility bills, provides Toronto with greater energy security and helps generate jobs associated with home energy retrofits and renovations. The City's financial incentive also helped facilitate a greater than national average take-up of the Federal and Provincial rebate programs, resulting in those dollars being invested in Toronto.

Participating homeowners can reduce their annual greenhouse gas emissions and reduce their utility costs by \$150 to \$300 annually. As of March 31, 2011, 14,565 homeowners in Toronto had taken advantage of the HEAT program. Map One highlights that homeowners participating in the HEAT program can be found all across the City.

The estimated amount of greenhouse gas emissions avoided as a result of the efforts of these homeowners to improve the energy efficiency of their house is 38,000 tonnes. It is also estimated that the HEAT program, helped generate 115 person years of employment for carrying out the energy retrofits of these 14,565 houses.

**MAP TWO:** Participants in the HEAT program by Ward  
Toronto: August 2009 to December 2010



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## Status

Program delivery and administration of HEAT is carried out by the Federal government through their Eco-Energy program. The federal program concluded on March 31, 2011 and the HEAT program as currently delivered has now ended.

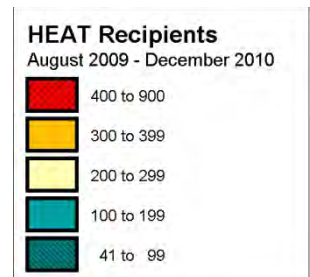
TEO staff have been working with Toronto Hydro, Enbridge Gas, the Ontario Power Authority and other key stakeholders on the a proposed one-stop collaborative Home Efficiency program. A staff report may be presented in 2011 regarding this proposal & the future course of the HEAT program.

For more information:

[http://www.toronto.ca/livegreen/greenlife\\_saveenergy\\_rebates\\_heat.htm](http://www.toronto.ca/livegreen/greenlife_saveenergy_rebates_heat.htm)

## 2j. Home Energy Help

When City Council endorsed the HEAT, it also directed that a component of the program be designed to accommodate the needs of low-income households residing in ground related single family housing. In May 2010, City Council endorsed the establishment of a collaborative pilot program with Enbridge Gas and Toronto Hydro called Home Energy Help. Officially launched in late 2010, this pilot program is supporting up to 300 low income households (who own their property or rent and pay the utilities) in making their property more energy efficient.



## Key Outcomes

Launched in October 2010, the City's financial commitment has resulted in leveraging \$1.5 million in investment from Toronto Hydro, Enbridge Gas, Provincial Energy Rebate Programs and the Federal Residential Rehabilitation Assistance Program. This partnership program makes it very easy for low-income households to substantially reduce their utility costs by \$300 to \$500 annually thereby reducing potential demands on other financial assistance programs geared to low-income households. The program also generates jobs associated with the home energy retrofits sector.

## Status

This is a pilot program and is scheduled to end in December 2011. A staff report proposing future activities based on the results of the pilot will be presented to City Council in late 2011.

As of March 31, 2011 a total of 67 households have participated in the program.

For more information:

[http://www.toronto.ca/environment/home\\_energy\\_help/index.htm](http://www.toronto.ca/environment/home_energy_help/index.htm)

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## 2k. Live Green Toronto Community Environmental Facilitators

In July 2007, City Council adopted the Climate Change Action Plan. One of the key recommendations was the establishment of the Live Green Toronto initiative, to support individuals, residents' groups, community organizations and other neighbourhood agencies to take action in their own neighbourhood and community. Community environmental facilitation makes up one of the major elements of the Live Green Toronto initiative.

The purpose of the community environmental facilitation component is to make available, to neighbourhood and community groups, people with the expertise to help them turn their great green ideas into reality. The Animators are generalists who are knowledgeable on a range of environmental issues, solutions, programs and resources and available to help facilitate and organize the community into taking action. The Facilitators have assisted community groups undertake a range of actions that include, but are not limited to: community tree inventories and plantings, group purchases and installations of renewable energy systems, coordinated energy efficiency audits and retrofits; development of community organization alternative transportation activities and more.



In 2009, the City entered into contracts with two not-for-profit agencies to deliver the services for the Environmental facilitators program. The two organizations are ACORN Canada and EcoSpark. ACORN Canada is contracted to work in four specific neighbourhoods that consist primarily of high-rise, low-to-moderate income tenants, while EcoSpark works directly with community groups (neighbourhood associations, faith and cultural groups, etc) to help them plan and implement greening projects.

The following summarizes the outcomes of the work of each organization.

### ACORN

In its first two years of operation (September 2008 to August 2010), ACORN engaged more than 2,700 of its members. With those residents ACORN has:

- organized eleven tree planting events resulting in over 2,400 trees and 200 wild flowers being planted;
- established five community gardens;
- organized neighbourhood and community meetings that have engaged 1,100 people;
- organized nine neighbourhood clean-up events;
- trained 50 residents to become leaders of change; and
- organized a five neighbourhood tenant challenge where 600 residents participated in a challenge to see which neighbourhood could achieve the greatest change in behaviour to a more environmentally friendly lifestyle.

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### EcoSpark

In their first two years of operation (December 2008 to December 2010) Community Environmental Facilitators working for Eco-Spark have worked with almost 200 community and neighbourhood groups.

With those community and neighbourhood groups and residents, EcoSpark has:

- assisted in the development and implementation of 76 community led projects;
- helped 34 of their community partners raise over \$1 million in funds from a variety of sources; and
- engaged with an estimated 20,000 residents in these projects.

In addition, as part of this contract Eco-Spark developed the video toolkit on eight key environmental issues. Its goal is to provide basic information that interested community groups can use to prepare themselves as they engage the Animators and other non-profits who work on these key issues. To view the videos, visit: [http://www.toronto.ca/livegreen/videoresources\\_videos\\_howto.htm](http://www.toronto.ca/livegreen/videoresources_videos_howto.htm)

**For more information about the Animators, visit:**

[http://www.toronto.ca/livegreen/greenneighbourhood\\_animators.htm](http://www.toronto.ca/livegreen/greenneighbourhood_animators.htm)

### 3. RESEARCH AND POLICY

#### 3a. Climate Change Adaptation Strategy

The Climate Change Adaptation Strategy was unanimously adopted by City Council in July 2008 to identify short and long term actions necessary to manage the physical impacts of extreme weather on the City's infrastructure, services, citizens and businesses.

Extreme weather such as rain, wind, drought and ice storms associated with changing weather patterns have been very costly to Toronto. For example, the August 2005 storm cost almost \$500 million to the insurance industry in claim payouts (e.g. basement flooding & other damage to cars, homes and businesses) and \$40 million to the City for road, bridge and sewer infrastructure repairs.



The World Bank, the National Roundtable on Environment and Economy, and a Canadian panel of climate change experts have all recently identified cities and their infrastructure to be at significant risk due to climate change. The problem of increasing frequency of extreme weather in Toronto is compounded by the age and under-capacity of our city infrastructure. Vulnerable people, such as the elderly, persons in poor health and/or having lower income are an added concern.

For more information:

<http://www.toronto.ca/teo/adaptation.htm>

### **3b. Climate Change Risk Assessment Tool**

The climate change adaptation strategy includes the development of a climate change risk assessment for City of Toronto operations that are being effected by climate change, such as the Transportation Services and Shelter, Support and Housing Administration Divisions. The risk assessment process developed by the Toronto Environment Office will help identify and manage what priority actions need to be taken to reduce risks.

With a more climate resilient City, City operations, residents and businesses will be less at risk from disruptions caused by extreme weather events.

### **3c. Toronto Urban Climate Change Network**

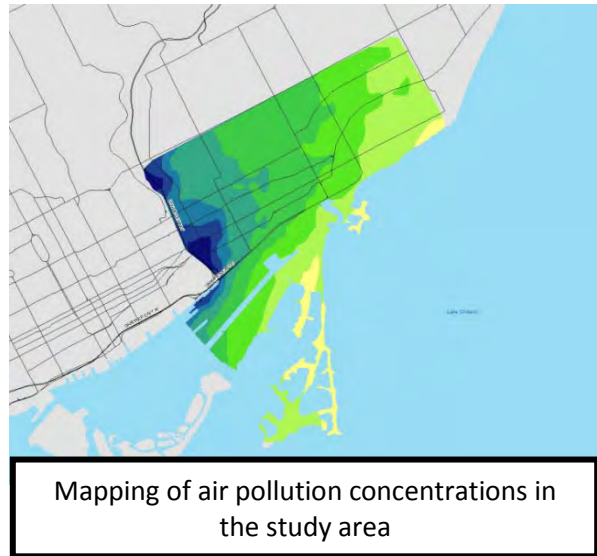
A component of the City's Climate Change Adaptation Strategy is the creation of the Toronto Urban Climate Change Network (TUCCN). The purpose of this group is to support co-operation, communications and research among Federal, Provincial and Municipal governments, colleges, universities and non-governmental organizations on climate change mitigation and adaptation actions and strategies.

A Working Group of TUCCN known as the Toronto Climate Change Science Advisory Committee is actively collaborating to develop a consensus on best available science on the current and future extreme weather profile for Toronto. The Toronto Environment Office is using federal and provincial resources along with several academics to develop a consensus on the best available science on Toronto's changing weather. This work is essential to help City staff, businesses and citizens understand how they will need to adapt to cope with increasing frequency of extreme weather events.

### 3d. Local Air quality Study (Wards 30 & 32 – South Riverdale-Leslieville-Beach)

In July 2005, the Toronto Board of Health requested that the City examine the air quality impact of emissions from all sources of air pollution in the South Riverdale-Leslieville-Beach (SRLB) area of Toronto. The TEO with a history of assessing City-wide air quality in Toronto using computer modelling was tasked with the work. The study was begun in November 2008 using an air quality model to produce maps of average and daily maximum concentrations of thirty air pollutants from all sources. The consultant phase of the study will be completed by the end of December 2010. City staff will continue with related work in 2011.

The SRLB study is the first high-resolution, neighbourhood-level air quality model completed within Toronto, and the first time that "Priority Air Contaminants" (a combination of five Ministry of Environment "Criteria Air Contaminants" and twenty five of Toronto Public Health's contaminants of interest) have been identified and modelled. Concentrations of most substances in the SRLB area meet provincial air quality standards. Addressing the few air quality issues that do exist requires a co-ordinated approach between city partners, other levels of government, and community stakeholders. This study suggests that the transportation sector will be a key focus point for planning effective pollution reduction strategies.



The technical ability to repeat the study process for other local neighbourhoods of the City has been integrated into the development of the SRLB Local Air Quality study and can be readily replicated elsewhere.

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### 3e. Greenhouse Gasses (GHG) and Air Quality Pollutants (AQ) Emissions Inventory

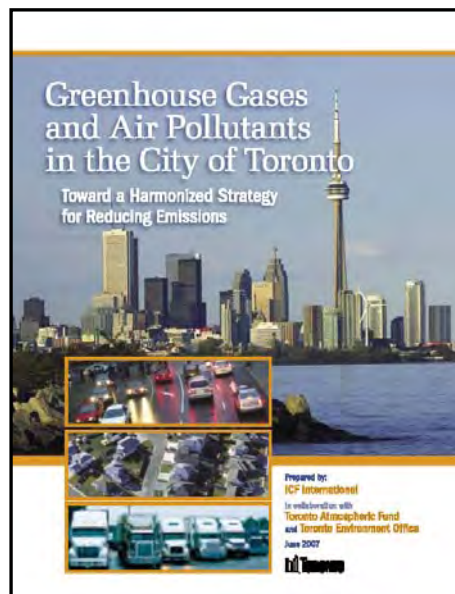
The Toronto Environment Office (TEO)'s 2004 emissions inventory (released in 2007) was the first time the City of Toronto created an integrated survey of both Greenhouse Gases and Criteria Air Contaminants emissions for both the City corporation and the community at large for one specific year.

The inventory addresses the integrated nature of the issues of climate change and local air quality, not only by recognizing the local amplification of smog by climate change but by also recognizing the common identities of the sources and the potential of common reduction measures. The second inventory of 2008 emissions will be completed in 2011.

The Greenhouse Gases and Criteria Air Contaminants combined inventory of energy consumption (electricity, natural gas, gasoline and diesel and other fuel use) and their related emission factors, along with the emissions related to waste management, acts as the central "information hub" for the City. This information hub is used to respond to all internal and external queries and projects that need to quantitatively assess City community and City Corporation emissions. Use of the inventory also ensures common reporting assumptions and consistency between various City divisions as in previous Green Initiatives reporting to the Parks and Environment Committee. Use of the inventory also ensures greater consistency and allows for more meaningful comparisons to be made between the progress of the City of Toronto and other cities toward the many varying emission reduction targets.

For more information:

<http://www.toronto.ca/teo/greenhouse-emissions.htm>



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### 3f. Energy Consumption Mapping

The Toronto Environment Office (TEO) obtained detailed monthly metered data for the 12 months in 2008 from Toronto Hydro and Enbridge to enable TEO to geographically map the consumption of electricity and natural gas within the City. The data has been aggregated to protect privacy issues. A process to annually update the energy consumption data has also been established.

Energy consumption can be mapped by geography, building type and activity and will allow the TEO to undertake detailed assessment leading to: a) identifying geographic areas with common building types in Toronto that clearly consume more energy than other parts of the City, or consume more energy than other land use types within the City; and b) in collaboration with its partners (such as Toronto Hydro and Enbridge or other service providers), to facilitate programs to promote and implement energy consumption and cost saving reductions among the community. (This analysis is beyond the simple annual City-wide totals that are assessed in TEO's emissions inventory.)

The energy consumption mapping is being undertaken in keeping with emerging energy mapping standards and techniques to better maximize common comprehension and potential grant program implementation especially to home owners and small businesses.

### 3g. District Energy and Geothermal Systems

As part of the implementation of the City's Sustainable Energy Strategy, a working group on District Energy and Geothermal systems was formed. The mandate of this working group is to develop a cohesive strategy that integrates clean distributed energy and geothermal projects to provide cost-competitive solutions for reducing greenhouse gas emissions. This working group is developing a discussion paper to detail the benefits, opportunities, barriers, and implementation strategies for expanding district energy in Toronto and recommendations for the strategic direction of this initiative.

District energy systems serve to manage the thermal needs of energy consumers at a building and community level. These systems can meet the demand for energy with improved operational efficiency, reduced energy costs, increased security of the energy supply, and less reliance on grid transmission infrastructure. District energy systems are not dependent on one technology or fuel type, and therefore provide a flexible platform for the adoption of new green technologies and fuels within a community in a smaller time frame.

#### Status

Encouraging implementation of these systems is the main focus of the policy that will be developed in 2011 including a discussion on the range of options that Toronto could use to address the barriers to district energy systems.



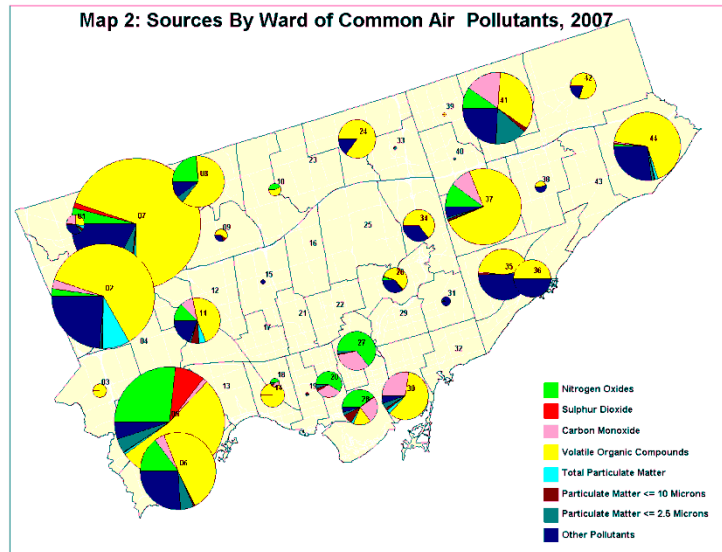
Lawrence-Allen Revitalization- Yellow Areas Indicate Potential District Energy Sites

April 30, 2011

### 3g. Regulatory Submissions

The Toronto Environment Office (TEO) acts as the liaison office between City divisions and other orders of government for the City's legally required obligations to report emissions from the City's various facilities. City facilities that are required to report include water treatment plants, water filtration plants, landfill sites, transfer stations and City yards.

The Director of TEO has the signing authority and responsibility to annually report the City's (City corporation) emissions to:



- i) Environment Canada's "National Pollutant Release Inventory" (NPRI) which is now harmonized with Ontario's Ministry of Environment (MOE) for air quality emissions reporting requirements;
- ii) Statistics Canada for Greenhouse Gas (GHG) emissions; and
- iii) Ontario's Ministry of the Environment for Greenhouse Gas emissions. TEO will also be coordinating the reporting function for the City's own ChemTRAC reporting systems in the City as well.

TEO provides consistency in the calculation methods, ensures timely reporting, verifies all facility reports are correct, reviews calculations for accuracy, integrates the reports with the City's emissions inventory and responds to Environment Canada's or Statistic Canada's or Ministry of the Environment's requests for updates and explanations on an ongoing basis.

For more information:

<http://www.ec.gc.ca/inrp-npri/default.asp?lang=en>

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