



Richmond Hill: The Earth Friendly Alternative

Sharing our Environmental Success

May 28, 2007



Agenda

- Partnering for Success
- Managing the Natural Environment
- What is the Town doing about Climate Change?
- Reducing our Corporate Footprint

Partnering for Success



We could not do this without our partners:

- 404-7 Smart Commute
- Clean Air Partnership
- Evergreen
- Ontario Streams
- Oak Ridges Friends of the Environment
- Richmond Hill Naturalists
- Rouge Valley Foundation (TURN)
- Windfall Ecology Centre
- Researchers from Ryerson University, University of Toronto, University of Waterloo, National Water Research Institute
- York Region, TRCA, other Municipalities



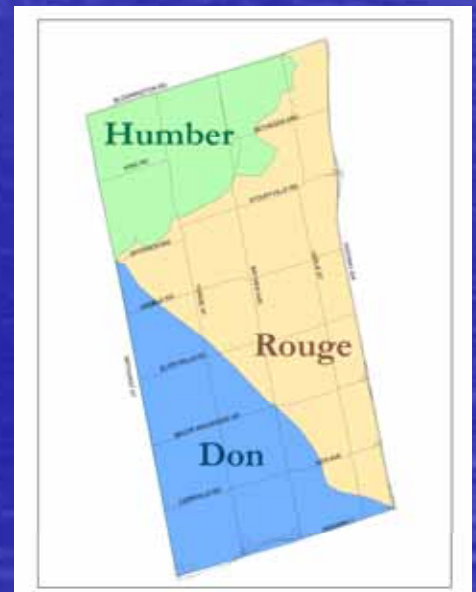
Managing the Natural Environment



Natural Heritage

- Headwaters of the Humber, Rouge and Don Rivers
- Oak Ridges Moraine
- 7 Kettle lakes including Lake Wilcox
- Rare and significant habitats
- Rare and significant plant and animal species (5 federally designated Species at Risk)

What watershed do you live in?



Managing the Natural Environment



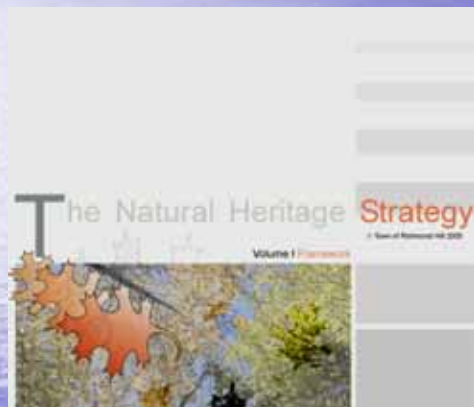
People and the Natural Environment?

- Human impact on natural areas in urban settings is significant and requires ongoing management
 - transport of invasive species, encroachments, dumping/litter, interference with wildlife, forest understory damage, unplanned trails
- Stormwater Impacts are caused by runoff from construction sites, roads, parking lots and lawns
 - Water Quality in lakes and rivers
 - Source water protection
 - Habitat implications

Natural Heritage Strategy

Natural Heritage Strategy

- An innovative plan to manage the Town's natural areas
- The Town has a responsibility to steward the natural areas that are under our management
- Sets out framework to protect and enhance the Town's diverse natural features
- Includes a biological inventory of the Town's natural areas
- Every resident of the Town should have a chance to experience a natural setting close to home



Natural Heritage Strategy

Four Success Stories

- Tree Planting
- Briar Nine Park & Reserve
- Newberry Park – Bringing back the frogs
- Community Stewardship & Education



Natural Heritage Strategy



Tree Planting

- 50,000th tree planted with community involvement in 2005
- Public demand for events continues to increase
- Numerous benefits include increased forest cover, low-cost approach to restoration, public awareness and education, opportunity for enjoyable physical activity, community building



Natural Heritage Strategy



Briar Nine Park & Reserve

- 13 ha park featuring a large meadow, regenerating and mature forests and the distinguishing topography of the Oak Ridges Moraine
- 2002-2005 site of Evergreen Partnership
- Project included construction of trails, wildflower meadow restoration, tree planting, invasive species removal, native plant demonstration garden, interpretive signs
- Over 500 volunteers have participated in events at Briar Nine (over 5900 trees planted since 2003)
- Moraine for Life Award



Natural Heritage Strategy

Newberry Park



- Sometimes the Natural Heritage Strategy identifies an opportunity to help significant species become re-established in a community
- Prior to development of Elgin East, Newberry Park was the site of a Provincially Significant Wetland
- NHS Monitoring Data indicates that many amphibian species present on the Moraine are no longer found in Elgin East
- Groundwater conditions facilitated the restoration of a wetland into the park and an opportunity to ‘bring back the frogs’
- Partnership with Ontario Streams



Natural Heritage Strategy



Stewardship and Education

- Outdoor Education partnership with TURN at Phyllis Rawlinson Park
- Adopt-A-Spot Program
- Arbor Week, Healthy Yards, Mill Pond Splash & Earth Day Events
- Trail Guides & Brochures (ORFE Resident's Guide)
- Interpretive Walks
- Organic Lawn Care, Stewardship and Composting Workshops

Lake Wilcox



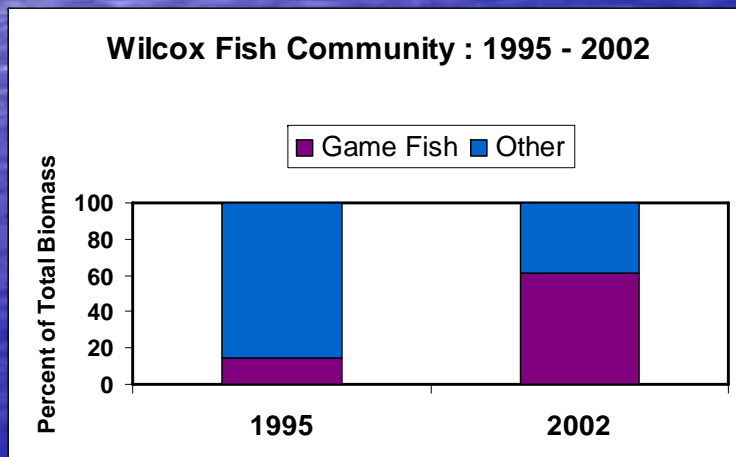
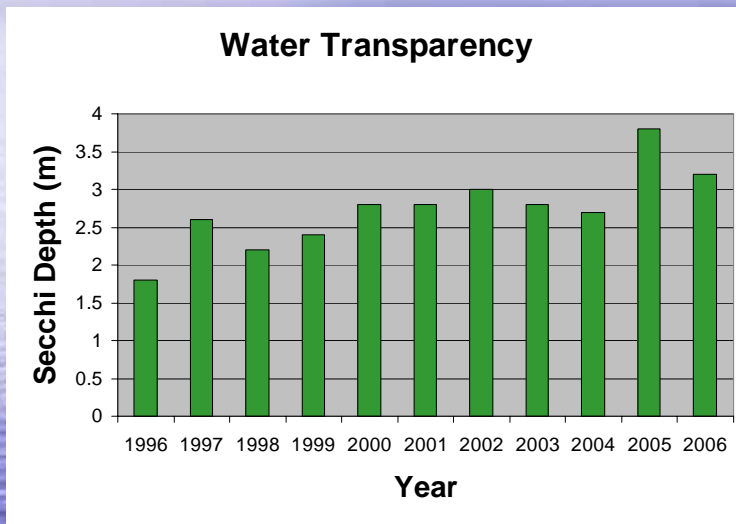
Lake Wilcox

- Largest Kettle Lake on the Oak Ridges Moraine
- Popular and valuable urban amenity
 - swimming, canoeing, windsurfing, fishing, aesthetic pleasure
- Impacted by historical use of the lake
- Richmond Hill completed Lake Wilcox Remediation Strategy in 2006 to:
 - Improve fish habitat
 - Reduce internal and external phosphorus loading
 - Improve oxygen conditions

Lake Wilcox

State of the Lake

- The Town has implemented 15 of 17 priority one recommendations
 - Water quality has remained steady and possibly improved slightly
 - Fisheries target set in the Strategy has been met
 - Increase in community awareness
 - More public land ownership
- Improvements are still required to reduce phosphorus in the lake
- Need for Hypolimnetic Withdrawal treatment to remove phosphorus stored in the bottom water of Lake Wilcox



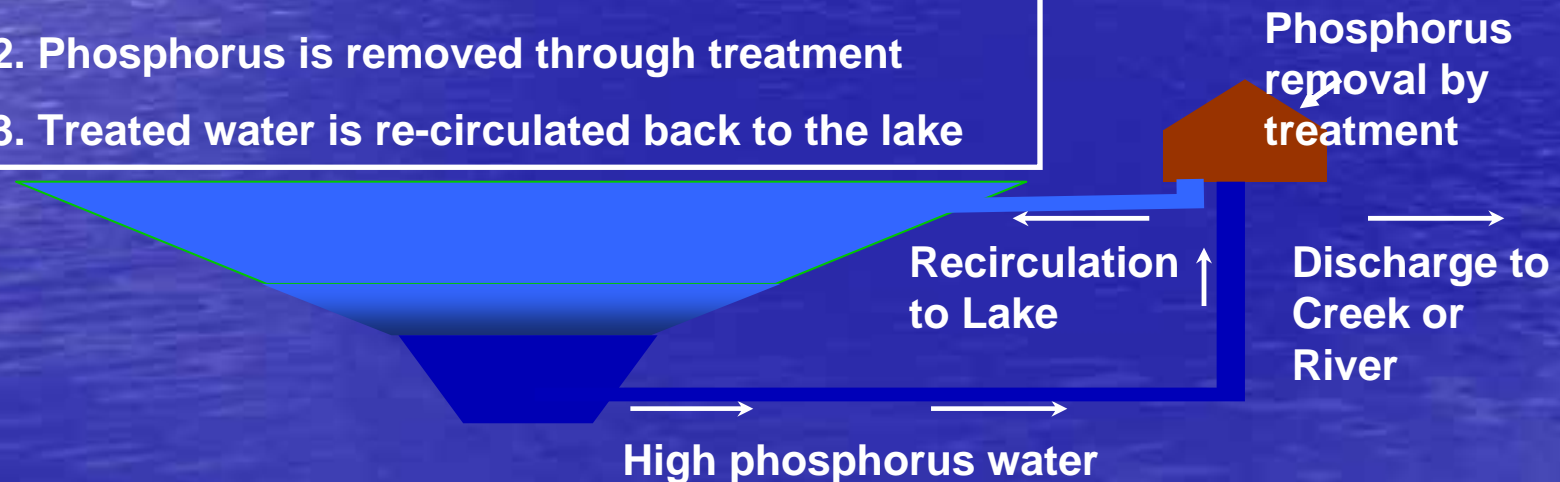
Lake Wilcox



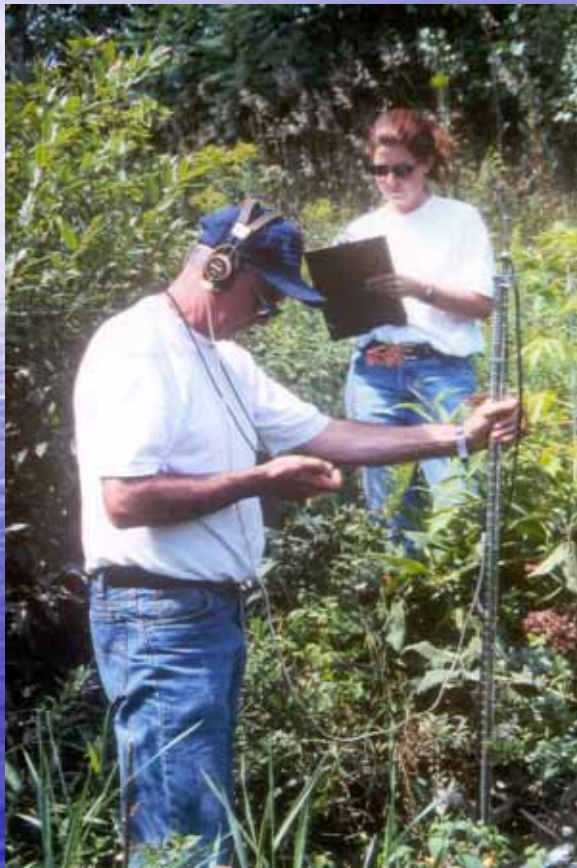
Finishing the Job

- Innovative PHOSPHEX™ technology shows promise of being able to remove phosphorus from Lake Wilcox water to low levels
- Pilot treatment study nearing completion – stay tuned

1. High phosphorus water is pumped from the bottom of the lake
2. Phosphorus is removed through treatment
3. Treated water is re-circulated back to the lake



Stormwater Management



Stormwater Management

- Industry leading Monitoring, Inspection and Operations protocols are in place to improve water quality and environmental habitats
- Information has been used to develop protocols and operating procedures for operations and maintenance.
- Development of a 10 year Capital Plan
- Sharing our information through the publication of scientific journal articles.
- Communications – Discovery Channel Presentation

Stormwater Management



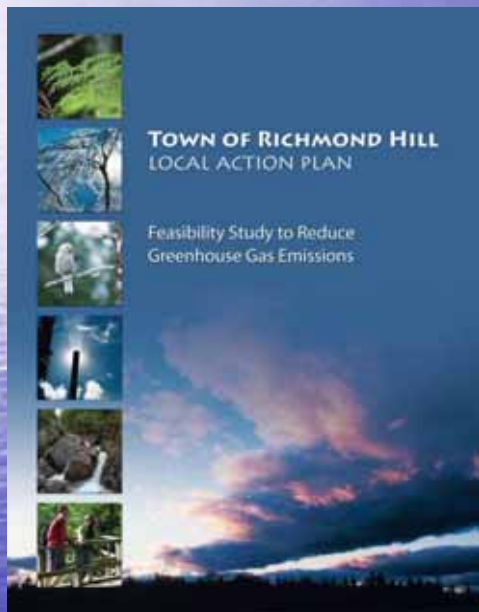
Richmond Hill is considered the leader in Canada for Stormwater Management Operations and Maintenance



Excellence in Leadership

- **National**
 - National Benchmarking Initiative: Richmond Hill hosted NBI Conference (2 Day) in SWM Innovation across Canada
 - Environment Canada – National Water Research Institute (Snow Storage and Salt Management)
- **Provincial**
 - Southern Ontario Municipal SWM Discussion group (40 Municipalities)
- **International**
 - Dallas, Texas WEFTEC USEPA Presentation: Future of SWM in North America
- **Local Programs**
 - University Partnerships with University of Toronto, Ryerson University, University of Guelph
 - Watershed Science Centre at Trent University
 - University of Toronto @ Scarborough (Masters of Environmental Science Internships)

What is the Town doing about Climate Change?



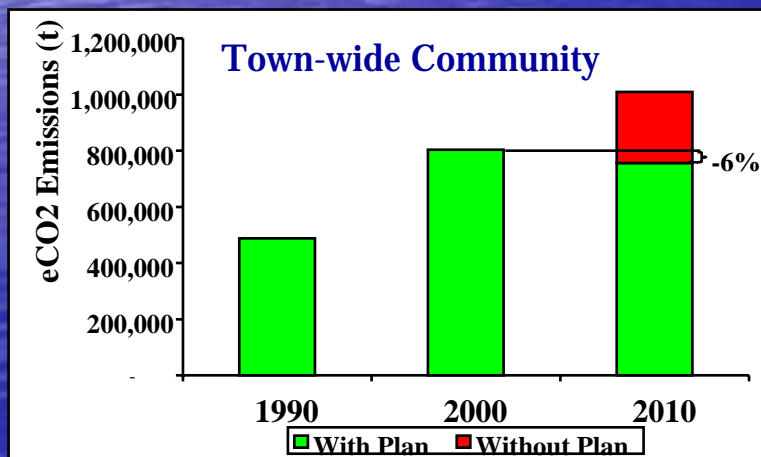
Climate Change

- Climate change is one of the most significant environmental issues of our time
- Municipalities are already facing climate change impacts in our communities
 - Flooding, Drought, Extreme Heat, Poor Air Quality, Severe Weather Events
- Recognizing the Municipal role in preventing climate change, cities around the world are making a difference
 - Partners for Climate Protection Program
 - GTA Clean Air Council

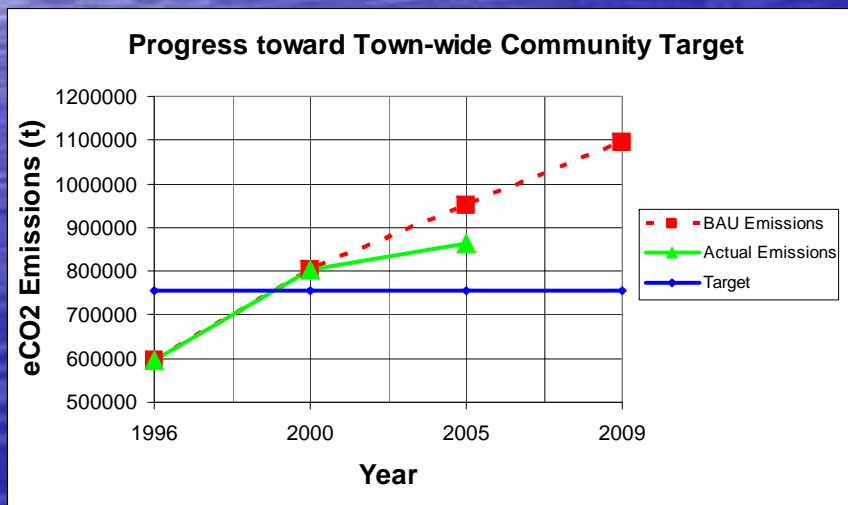
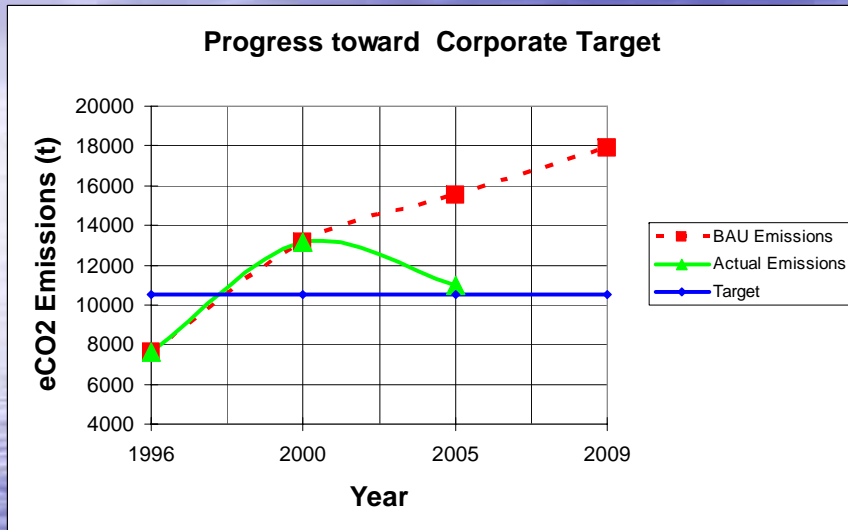
What is the Town doing about Climate Change?

We have a Clean Air Plan

- Based upon Partners for Climate Protection 5 Step Methodology
 - Milestone 1: Taking Stock
 - Milestone 2: Setting a Target
 - Milestone 3: Developing the Plan
 - Milestone 4: Implementing the Plan
 - Milestone 5: Measuring Progress
- In 2004, 1st Municipality in Southern Ontario with Targets and a Council Approved Plan under PCP program
- Targets to be met by 2009-2010



What is the Town doing about Climate Change?



Where we are now?

- Corporate Target
 - 80% of the way towards our target of 20% decrease in GHG emissions below 2000 levels
- Community Target
 - 45% of the way towards our target of 6% decrease in GHG emissions below 2000 levels

What is the Town doing about Climate Change?

Success stories

- 404-7 Smart Commute
- Green Fleet
- Buildings Energy Efficiency & Renewable Energy
- Wind Power



What is the Town doing about Climate Change?

404-7 Smart Commute

- A innovative commuter option program to encourage people out of single occupancy vehicles
- 80 businesses representing over 25,000 employees are engaged in the program
- Reduction in vehicle kilometer trips: 85,950
- New Pedestrian & Cycling Masterplan



What is the Town doing about Climate Change?



Green Fleet

- Have been using green fuels such as biodiesel and ethanol enhanced gasoline in fleet since 2004
- Fleet of 6 Hybrid Gas-Electric vehicles with more on the way
- Staff Anti-idling Policy and Program
- Role of GTA-CAC in promoting fleet best management practices

What is the Town doing about Climate Change?



Building Energy Efficiency & Renewable Energy

- LEED™ Green Building Policy
- Building Automation Systems
- Renewable Energy
 - Geothermal heat at Theatre
 - Solar Installation at Town Hall
- Mayor's Megawatt Challenge Award for Most Energy Efficient Town Hall



What is the Town doing about Climate Change?



Wind Power Study

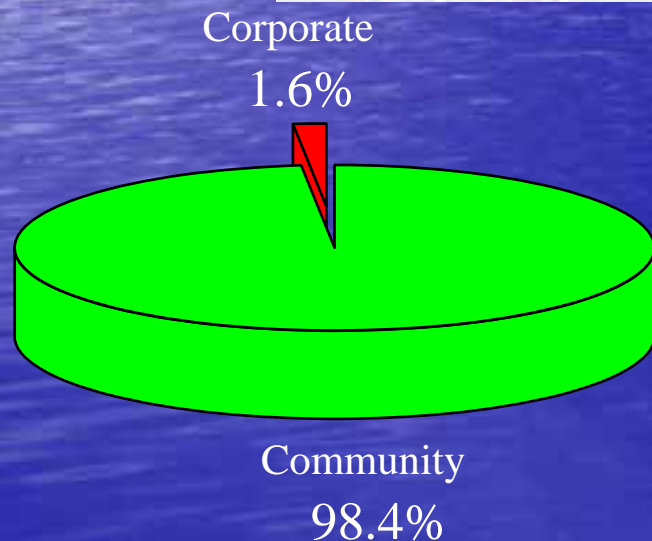
- Council requested that staff report on the potential of Wind Power in Richmond Hill
- Pre-Feasibility Study concluded that there was potential for a successful project with modest economics and a high degree of environmental benefits
- The project could involve up to 3 turbines with a 5MW capacity (enough for 2500 homes) on a Town-owned site between Leslie St & Hwy 404 N of Stouffville Rd
- Detailed Wind Study (one full year of monitoring) is complete and final details are being worked out – stay tuned
- A successful Wind Power project means the Town could reach its Kyoto target by 2010 despite having grown by 2.5 times.

What is the Town doing about Climate Change?



Community Initiatives

- Energy Efficiency Open House
- National Public Works Week Open House
- 404-7 Smart Commute
- Commute to Work Week
- Anti-idling Education Outreach
- Need help – talk to us or one of our partners like the Windfall Ecology Centre



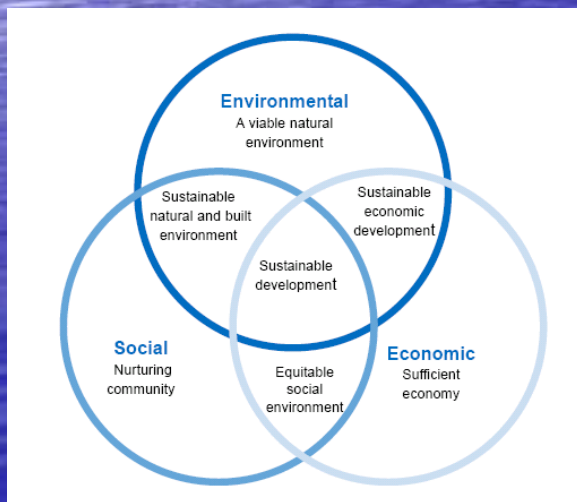
The Town has a Plan to reduce our Greenhouse Gas Emissions... Do You?

Reducing our Corporate Footprint



Ecological Footprint

- The 'Ecological Footprint' measures how much impact we have on the earth in order to:
 - provide resources for our operations, and
 - receive the wastes we generate
- Commonly used as a measure of sustainability, both for individuals and organizations
- Ways to reduce the footprint
 - Consume less energy and goods
 - Divert wastes from landfill, reduce or eliminate hazardous wastes



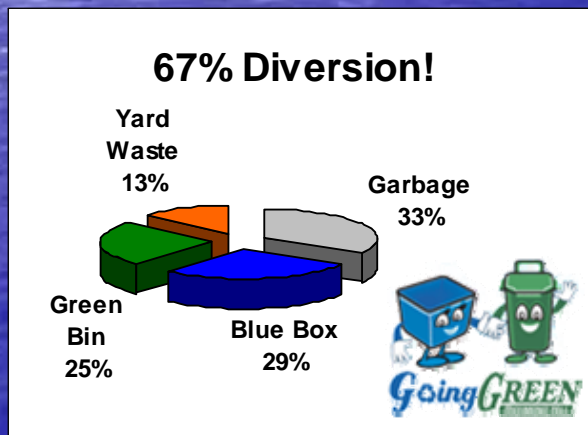
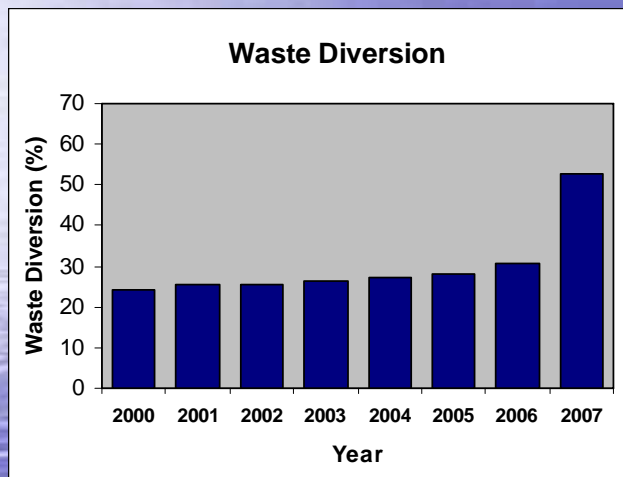
Reducing our Corporate Footprint

ISO 14001 Environmental Certification

- Engineering & Public Works Dept. has been awarded ISO 14001 Environmental Certification for meeting the strict requirements of the international standard
 - Improving environmental performance
 - Minimize impacts on the environment
 - Comply with environmental regulations
 - Continual improvement of practices



Reducing our Corporate Footprint



Waste Diversion

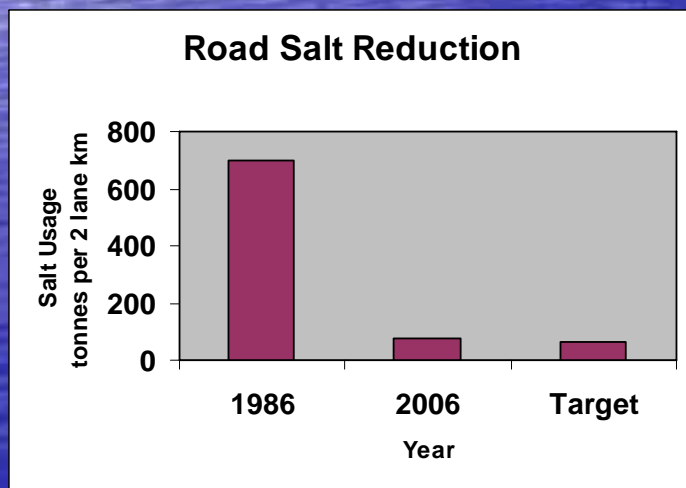
- GoingGREEN program a success
- Waste diversion in single family homes has increased to 67%
 - Overall Town residents are diverting 53% of their waste, still below the 65% target that Council has set
- The Town's waste diversion at the Municipal Offices was 53% in 2006
 - Increased blue box participation and new green bin could see this rise to almost 90%

Reducing our Corporate Footprint



Road Salt & Chemical Reduction

- Road Salt Management Plan with innovative techniques to reduce salt
 - Pre-wetting and brine
 - Road Weather Information Systems
 - Electronic control over spreading
- Decrease in salt usage
 - In 1985: 700 kg per 2 lane km
 - In 2006: 75 kg per 2 lane km
- Similar approach to other chemicals
 - Last year we eliminated two additional hazardous chemicals from Town use



Reducing our Corporate Footprint



Pesticide Reduction

- Following Public Consultation the Town has implemented a Pesticide Reduction Strategy
- Hosting Organic Lawn Care Workshops
- Healthy Yards Program has run at capacity with a waiting list for 3 years since initiated in 2005
- Distributing native plant and organic lawn care information packages
- Over 650 residents have participated
- Richmond Hill Naturalists & Oak Ridges Friends of the Environment promote programs and assist with Healthy Yards Event

Welcome to the Premiere showing of...

