

Welcome



For You. The World.



Toronto Pearson
International Airport | Aéroport International




A Commitment to the Environment

Part of the Local Environment



Reason for Being

- Mitigate or Minimize the Airport's impact on the community and the natural environment
 - Regulatory compliance
 - Become a positive community asset
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Environment Departments - Responsibilities

Environment

EMS

- Plan, do, check, act
- Set Env't. Targets
- Monitoring
- Env't. Emergency Response Plan
- EMS Compliance
- Sustainability Reporting

Air Quality

- GHG Calculation
- Monitoring
- Modeling

Outreach

- Sustainability
- CENAC
- PPG
- Tours
- Community

Storm Water

- Quality and Quantity Mgt/
- Storm water Facility control
- Spills/ response
- Creek Rehab
- De-icing Control

Professional Services

- Land Transfer
- Contacting/ Purchasing requirements
- Site Assessment
- Waste/Recycling/HASEP
- Lease clause update
- Compliance Audits
- Hazardous Material
- Technical Support
- Insurance/risk
- Financial Signoff

Strategy

- Climate Change –Adaption and Mitigation
- ICAO,CAC,AC

Policy

- 20/20/20
- Electric Vehicle, LEED, Idling


Legal Review

History and Historical Commitments

History

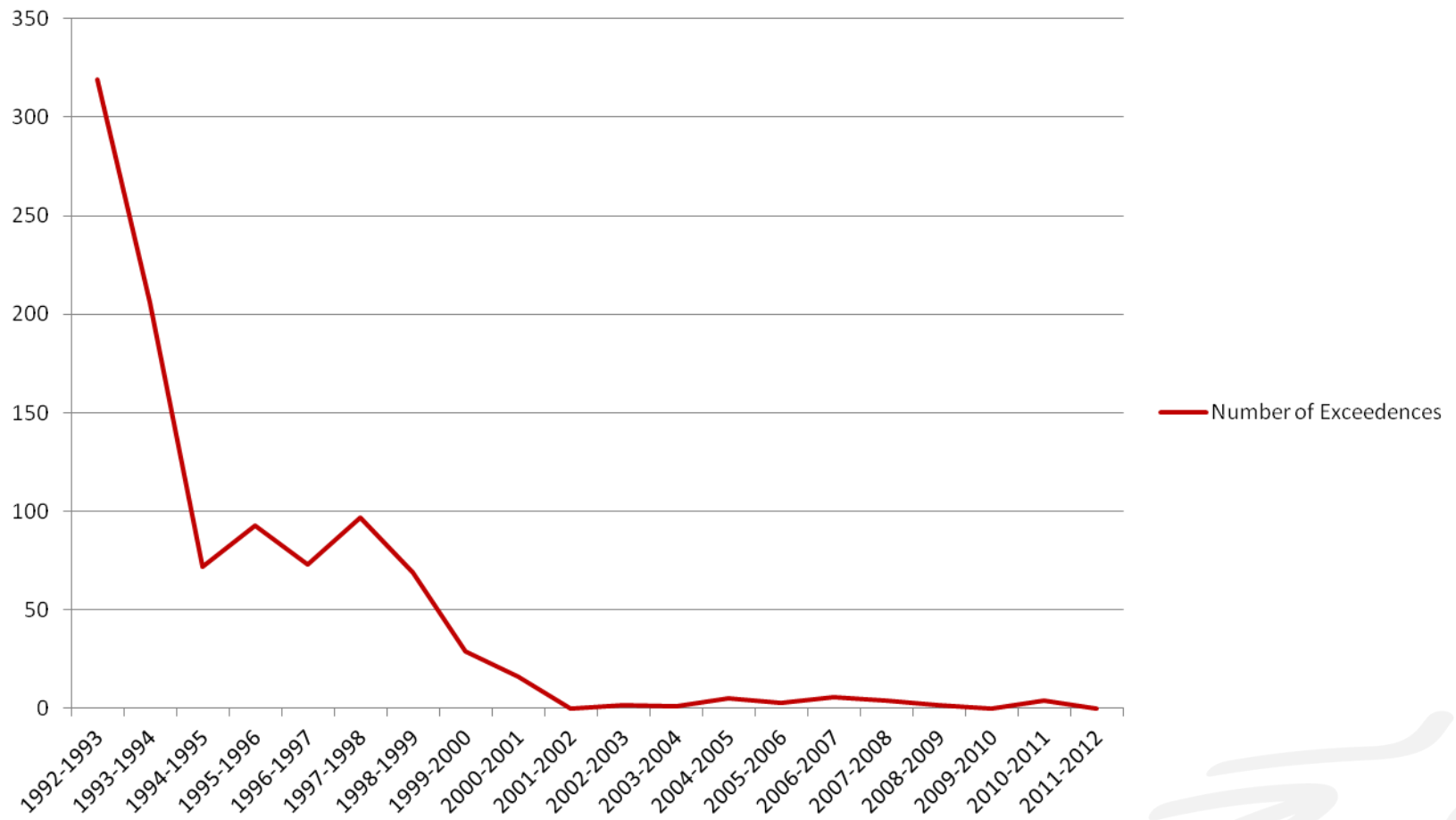
- Early years and change

The Addition of new runways would have the following impacts:

- Cleaner stormwater runoff
 - Air Emissions would be lower
 - Reduced waste
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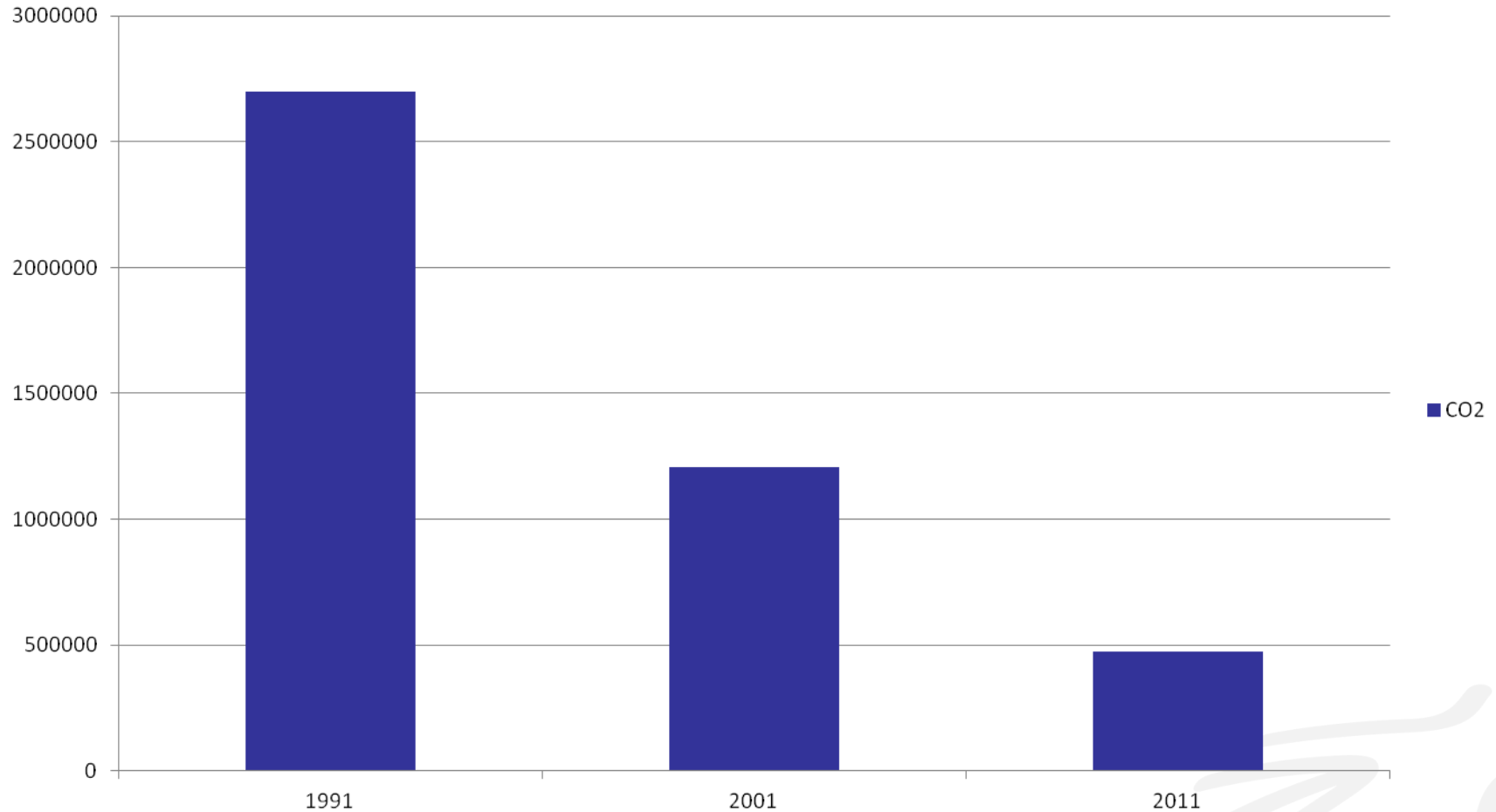
Stormwater -Glycol

Number of Exceedences




GHG Emissions (CO2 – Tonnes)

CO2



Environmental Management

ISO 14001 Environmental Management System:

- **2nd Airport in the World to achieve ISO 14001 certification (1st in NA)**
 - **Thorough review of all environmental aspects**
 - **Targets Established, with deliverable dates**
 - **System externally audited**
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\$120 Million in Stormwater Management Facilities



Stormwater Management

Four Major Stormwater Facilities

Carlingview (17,000 m³)

Moore's Creek (84,000 m³)

Aeroquay (7,000 m³)

Etobicoke Creek (56,500 m³)

Total 164,500 m³

Eleven existing major stormwater ponds

Total Storage 112,860 m³

Assorted other minor ponds



Etobicoke Creek Facility



Moore's Creek Storm Water Facility



Moore's Creek Facility



Carlingview Facility



CDF

➔ **Largest CDF in the World**

➔ 26 hectares – entire site has HDPE liner

➔ Complex integrated collection system with 13,510 m³ of SADF Underground Storage

➔ 825,000L Fresh Glycol Storage



Implementation and Operation

**Resources, roles, responsibilities
and authority**

**Competence, training and
awareness**

Operational Control

**Emergency Preparedness &
Response**





Naturalization



Creek Rehabilitation

**Etobicoke and Spring
Creek**

**Holistic restoration
efforts**

“Dynamic” stability



Creek Rehabilitation



Result...



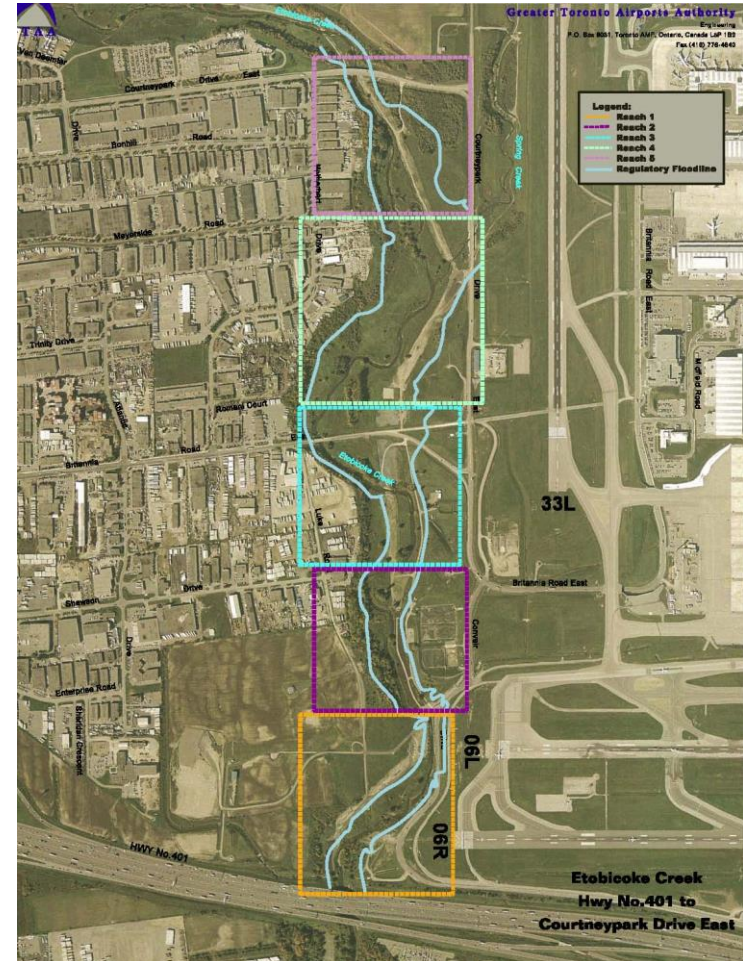
12 Tonnes; Bag-by-Bag



Community

Etobicoke Creek Trail

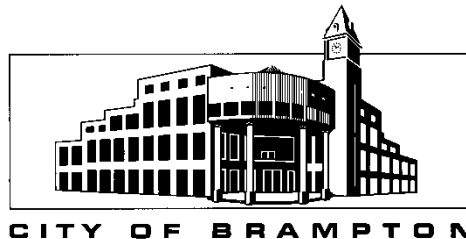
- 3.7 kilometres on airport property, completed 2009
- Joint venture of the City of Mississauga; Toronto Region Conservation Area, and Cities of Brampton, and Toronto



A Partnership between



GREATER TORONTO AIRPORTS AUTHORITY





Ecology



Waste Reduction

Airport wide recycling program in place

3R's reduction rate:

63% for domestic waste

90% for construction waste

90% for contaminated soil remediation



Result of Sustainable Approach

Site was brownfield when GTAA took over in 1996

The airport has almost completely been re-built over the last 17 years

Significant improvements in all areas

Development has had minimal environmental impact, given the sustainable approach adopted by the GTAA



Soil Remediation Facility (Biopile)



Hazardous Materials

PCBs and Asbestos

The Terminal Development Project has resulted in the elimination of these substances on the airport

CFCs and Halons

The Terminal Development Program has resulted in the elimination of the older cooling equipment, replacing it with new equipment that utilizes less environmentally hazardous refrigerants

T1 New

Designed for passenger and staff comfort and health.






Air Quality



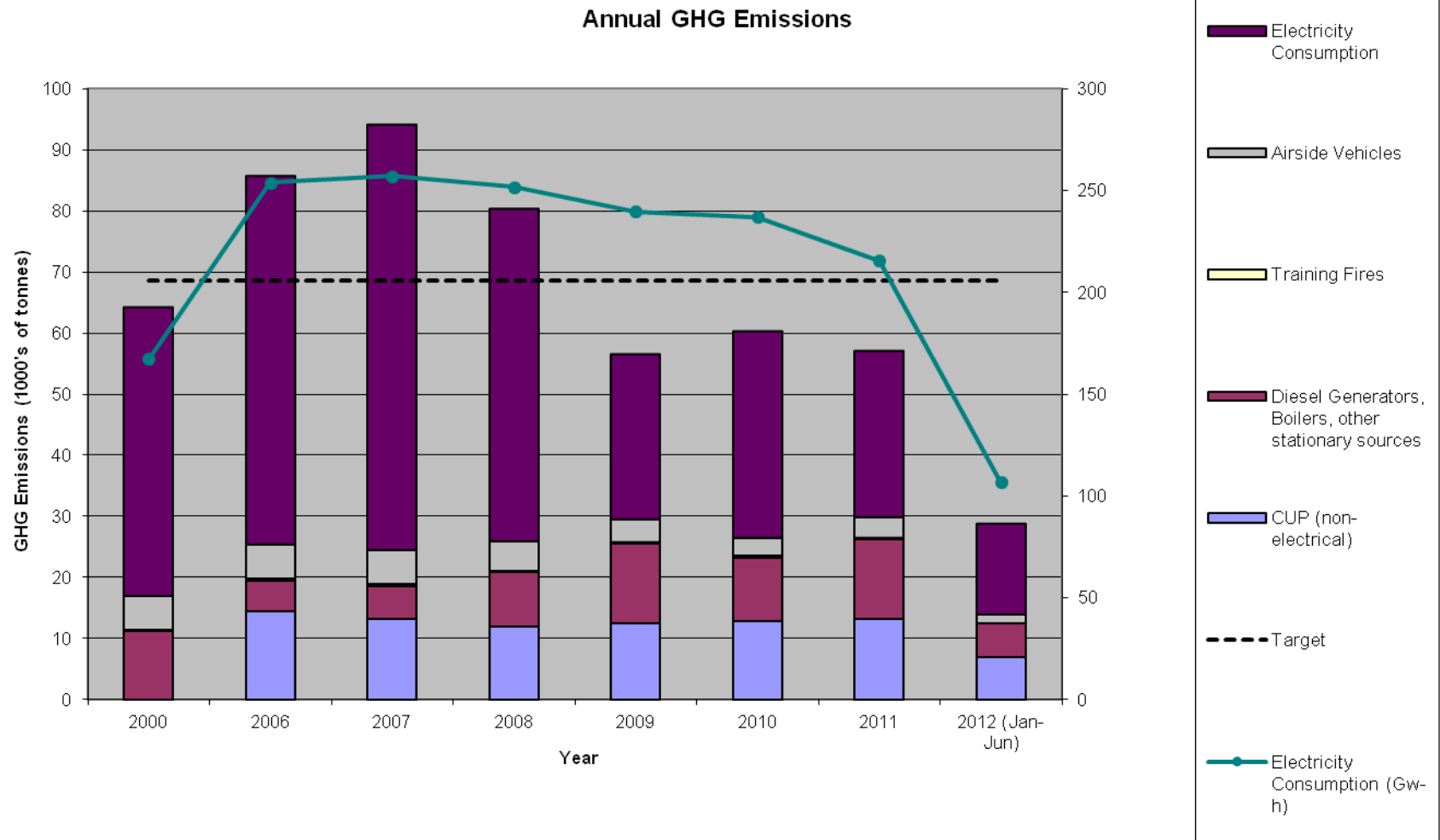
Looking Back: Greenhouse Gas Policy

GHG emissions identified as a Corporate Risk

Commitments:

- Reduce GTAA's GHG emissions by 20% below 2006 baseline by 2020
 - Annual funding for GHG-reducing programs and projects
 - Take GHG emissions into account in future projects
 - Annual internal reporting on GHG-reducing programs and projects
- 

GHG Reduction Program



Energy Management

In 2006, the GTAA saved approximately 4,000 MWh of electricity and 39,000 GJ of heating energy by using “free” steam from the Cogeneration Facility.

GTAA practices saved:

- 20,104 Mw hours 2004
- 28,458 Mw hours 2005
- 45,639 Mw hours 2006
- 47,319 Mw hours 2007
- 24,526 Mw hours 2008
- 24,970 Mw hours 2009
- 26,957 Mw hours 2010
- 29,427 Mw hours 2011

45,639 Mw hours is equal to approximately 2.25 hours of consumption for the entire province of Ontario

OR

6338 homes



Comparison of Measured and Modelled NO_x (and NO₂) Impacts

	Maximum Measured Concentration (µg/m ³)			Maximum Modelled Concentration (µg/m ³)			
	1999	2000	2001	2000	2005	2010	2015
Phase 1 NO2 estimated using OLM							
OPSIS 1 hr. NO _x NO ₂	697 (204)	966 (211)	522 (160)	6,521 (733)*	4,882	4,238 (172)	4,755
OPSIS (An.Mean)	80	81	74	60	55	42 33	55
Phase 3 NO2 estimated by mult. Total NO _x by 0.34							
(1 hr) Centennial Park NO _x NO ₂	1,099 (238)	1,088 (166)	-	2,050 (697)**	2,075	2,075	2,075
Centennial Park (An. Mean)	90	84	-	37	37	37 15	27



A Commitment to the Environment –to the Community

Challenges and Opportunities



Thank you



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