

Ontario  
Environment  
Handbook

2003

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*The Environment Handbook 2003 (draft version) was written by Mark Winfield and produced by Environmental Communication Options.*

*This is a summary document. While great care has been taken to verify the data and information contained in this handbook, please refer to the original reports, referenced in the handbook's footnotes, for more information. A copy of this document is available in pdf format and can be downloaded at [www.ontarioelectionenvironment.com](http://www.ontarioelectionenvironment.com).*

*The use of organizations and individuals names referenced in our many "For More Information" sections reflect their long-term involvement on these key issues, not endorsements of the material in the handbook.*

# Report Outline 2003 ONTARIO ENVIRONMENT HANDBOOK

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# 1. INTRODUCTION

## 1.1 PURPOSE

The purpose of this document is to provide an overview of the key environmental issues in Ontario in 2003 to members of the media and other observers.

## 1.2 HOW TO USE THIS HANDBOOK

This handbook consists of this introduction and seven chapters dealing with specific issue areas (Air Quality; Water; Urban Sprawl and Smart Growth; Municipal and Hazardous Waste Management; Electricity and Energy; Forestry and Parks; and Governance – Tabs for Each section).

Each issue area chapter consists of four sections: a situational overview and key facts around each issue area; an overview of the major issues; a summary of the actions needed by the provincial government to address these issues, and sources of additional information (websites and people). Where appropriate, maps and graphics are provided identifying geographic focal points for each issue. Website addresses for key contacts are also included.

# 2. AIR QUALITY

## 2.1 INTRODUCTION

Air quality has emerged in the last five years as one of the most critical environmental and public health issues facing the province. Severe smog episodes, caused by a combination of emissions from cars and trucks, industrial sources, and coal-fired electricity generating plants, have become an unwelcome feature of spring and summer throughout southern and central Ontario.

Some areas of the province, including Sarnia, Hamilton and Sudbury, are also heavily affected by emissions of toxic air pollutants, including carcinogens and heavy metals from industry.

Finally, growing attention is being paid to the implications of global climate change for Ontario's economy and the health of its residents, and to the need for Ontario, Canada's second largest generator of greenhouse gases after Alberta, to reduce its own emissions.

## 2.2 SMOG

### 2.2.1 THE VITAL FACTS

#### What is Smog?

- Smog consists of two main ingredients: ground level ozone, and fine particulate matter.
- Ground level ozone is produced when nitrogen oxides (NOx) and volatile organic compounds (VOC) react in sunlight and stagnant air. Particulate matter is a combination of windblown dust and soil as well as chemical reactions involving NOx, sulfur dioxide (SO<sub>2</sub>), VOCs and ammonia. Other chemicals, such as Carbon Monoxide (CO) are also present in smog. Emissions of NOx and SO<sub>2</sub> are also the major sources of acid rain.

Figure 1: Ontario VOC Emissions by Sector (Emissions from Human Activity, 2000 Estimates)

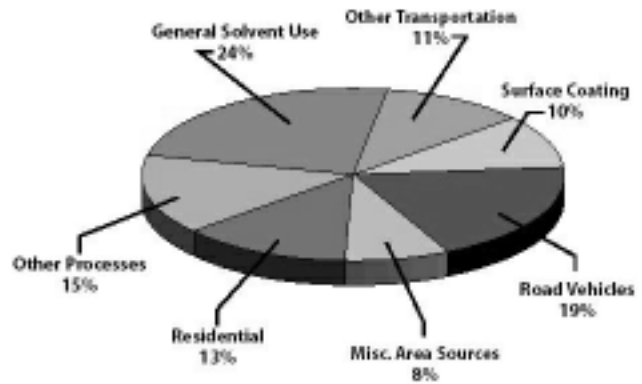
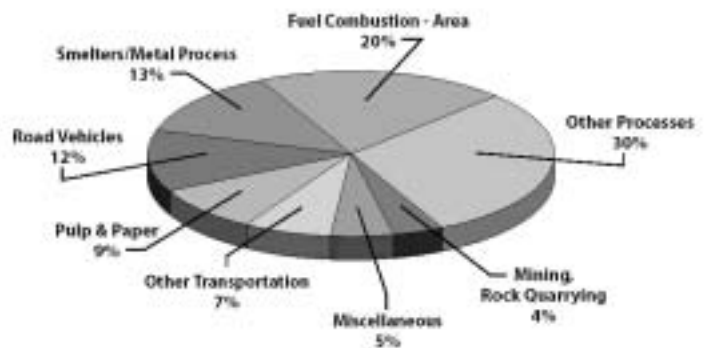
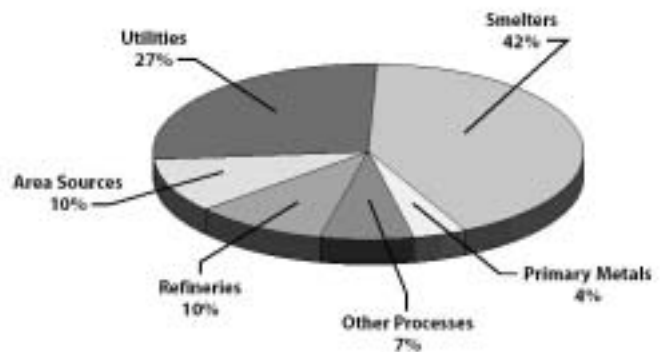


Figure 2: Ontario PM<sub>10</sub> Emissions by Sector (Emissions from Human Activity, 1995 Estimates)

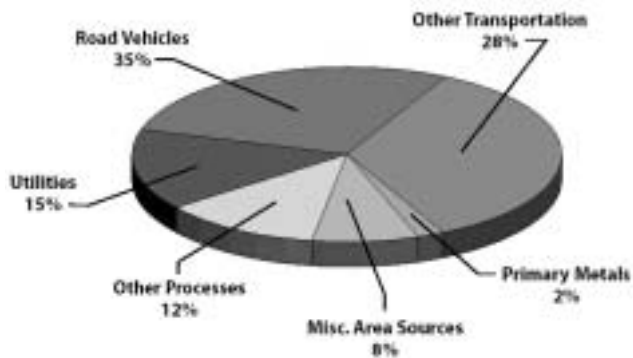


[1] Emissions from road dusts, construction, agricultural, etc., are not included.  
 [2] Emissions from open sources from the smelters are not available.  
 \* Most recent estimates.

Figure 3: Ontario Sulphur Dioxide Emissions by Sector (Emissions from Human Activity, 2000 Estimates)



**Figure 4: Ontario Nitrogen Oxides Emissions by Sector**  
(Emissions from Human Activity, 2000 Estimates)



### *Where does Ontario's smog come from?*

- Ontario's major domestic sources of NO<sub>x</sub>, SO<sub>2</sub>, VOC, Particulates and Carbon Monoxide are presented in Figures 1 through 5.
- The Ontario government has estimated that approximately 50% of the pollution causing smog in Ontario comes from the US. However, US states downwind of Ontario, such as New York, highlight Ontario's role as a source of their air pollution.

### *What are the health impacts of smog in Ontario?*

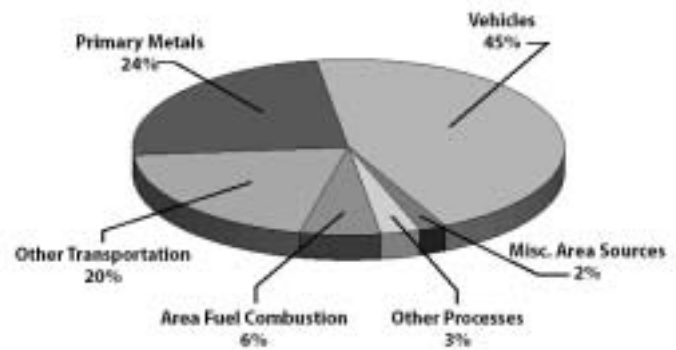
- Severe smog episodes occur throughout southern and central Ontario in the spring and summer.
- The health impacts of smog in Ontario are severe. The Ontario Medical Association (OMA) estimated in 1999 that smog was to blame for 1,900 premature deaths, 13,400 hospital admissions, 45,250 emergency room visits and 46.66 million minor illness days.<sup>1</sup> Health effects due to air pollution are estimated to cost the province \$9.9 billion per year.<sup>2</sup> Smog's impact is estimated to grow every year.

## 2.2.2 THE KEY ISSUES

### ➤ 2.2.11 ONTARIO POWER GENERATION'S COAL FIRED PLANTS

- Ontario Power Generation (OPG) operates five coal-fired power plants: Lakeview (Mississauga);

**Figure 5: Ontario Carbon Monoxide Emissions by Sector**  
(Emissions from Human Activity, 2000 Estimates)



Nanticoke (Lake Erie north shore); Lambton (Sarnia); Thunder Bay and Atikokan (both in northwestern Ontario).

- Increased reliance on OPG's coal-fired electricity generating plants as a result of the laying-up of a number of the utility's nuclear generating plants from July 1997 onwards due to safety and maintenance concerns has had a negative impact on air quality in the province.
- Between 1995 and 2001:
  - Emissions of GHGs increased by a factor of 2.3
  - Emissions of SO<sub>2</sub> doubled
  - Emissions of NO<sub>x</sub> increased by a factor of 1.7.
- Nanticoke alone accounted for half of the 7% increase in total air emissions from Canadian industrial facilities reported through the NPRI between 1998 and 2000.
- In 2001 OPG's coal-fired plants accounted for:<sup>3</sup>
  - 27% of Ontario's SO<sub>2</sub> emissions
  - 20% of Ontario's GHG emissions (Note NRCan estimate is 14%)
  - 14% of Ontario's NO<sub>x</sub> emissions
  - 67% of Ontario's chromium emissions
  - 34% of Ontario's airborne mercury emissions
- The government announced NO<sub>x</sub> and SO<sub>2</sub> emission caps for the electricity sector in October 2001.
- The government states that by 2007 these caps

1. Ontario Medical Association, The Illness Costs of Air Pollution in Ontario: A Summary of Findings (Toronto: Ontario Medical Association, June 2000), updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003.

2. Ontario Medical Association, The Illness Costs of Air Pollution in Ontario: A Summary of Findings, updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003

3. Ontario Clean Air Alliance Countdown Coal, February 2003, pg.2.

will reduce NO<sub>x</sub> emissions from the facilities by 53%, meeting the Canada-US Ozone Annex<sup>4</sup> targets and reduce SO<sub>2</sub> emissions by 25%.

- These targets are well short of what has been identified as necessary to protect human health and the environment.
- The OMA has stated that the NO<sub>x</sub> cap for the electricity sector should be 6,000 tonnes, not 37,000 tonnes as adopted by the government, to protect human health.<sup>5</sup>
- A 75% reduction in emissions of SO<sub>2</sub> beyond existing emission caps has been identified through the Canadian Council of Ministers of the Environment (Acidifying Emissions Task Group), as being necessary to protect the environment and health.
- The caps don't address other pollutants, such as heavy metals, mercury and chromium, of which the electricity sector is a major source.
- The caps on electricity sector emissions were adopted at the same time as an emission trading system. This has been criticized for allowing trading with uncapped sectors, with the effect that OPG will be able to legally increase the emissions from its coal fired plants beyond the caps adopted in October 2001.<sup>6</sup>
- The government has announced a commitment to require that OPG phase out its coal-fired power generating plants by 2015. The Ontario Clean Air Alliance and others have argued that the plans should be phased out sooner, given their health impacts. The government has required that the Lakeview generating plant in Mississauga phase out its use of coal as a fuel by 2005.

#### ➤ 2.2.1.2 EMISSIONS FROM OTHER INDUSTRIAL SECTORS

- The government released a discussion paper on NO<sub>x</sub> and SO<sub>2</sub> emission caps and emission trading for other sectors in December 2002, but has taken no further action to date.

- Requirements for 34% reductions in SO<sub>2</sub> and NO<sub>x</sub> emissions relative to the caps to be in place by 2006 as established through the 1986 Countdown Acid Rain program were adopted for the INCO and Falconbridge smelters in Sudbury in February 2002.
- The standards fail to address other emissions from these facilities. They are major sources of releases of heavy metals, including arsenic, lead and nickel.
- The emission targets for the metal smelting sector are far short of the 75% reduction relative to current caps that were suggested by the Canadian Council of Ministers of the Environment as being necessary to control the environmental and health impacts of SO<sub>2</sub> emissions.
- A mandatory air emission monitoring system was established by the province in June 2002, including reporting requirements for GHGs, smog precursors and air toxics.
- Facility reports can be viewed at <http://www.ene.gov.on.ca/enviromet/onair/splash.htm> <http://www.pollutionwatch.org>

#### 2.1.3 VEHICLE EMISSIONS

- The government's only significant initiative on smog related vehicle emission has been the Drive Clean inspection and maintenance program, launched in 1999.
- The program's actual impact on air quality is uncertain and the Environmental Commission has observed that the program's benefits are likely to be overwhelmed by the growth in the total number of vehicles, typical vehicle size, and the total number of vehicle kilometers per year in Ontario.<sup>7</sup> The government's current policies on land-use and transportation infrastructure which promote and facilitate urban sprawl and automobile dependency are reinforcing these problems. (*See Chapter 4: Urban Sprawl and Smart Growth*)

4. An amendment to the 1991 Canada-US Air Quality Treaty. The Ozone Annex dealing with smog sources and was signed by Canada and the United States in October 2000.

5. OMA, Ground Level Ozone Position Paper, May 1998.

6. OCAA, Weak Emission Limits, May 2001.

7. ECO, 2001-2002 Annual Report, September 2002, pg.99



**Figure 6: Ontario Power Generation's Coal Plants: Electricity Generation and Emissions, 1995-2001**

	1995	1996	1997	1998	1999	2000	2001
<b>Electricity Generation (Gwh)</b>	16,699	18,915	24,523	33,275	34,068	41,446	37,185
<b>Greenhouse Gases (tonnes)</b>	15,400,000	17,900,000	22,430,000	29,800,000	30,530,000	37,640,000	35,090,000
<b>Sulfur Dioxide (tonnes)</b>	74,100	84,500	123,150	140,810	140,580	163,510	147,090
<b>Nitrogen Oxides (NO) (tonnes)</b>	28,200	35,100	42,770	54,320	49,240	49,450	42,170

1 Gwh = 1,000,000 kilowatt-hours  
Sources: Ontario Power Generation, *Towards Sustainable Development: 2001 Progress Report*, Appendix A; *Towards Sustainable Development: 1999 Progress Report*, Appendix A; Email from Ontario Power Generation, August 22, 2000.

### 2.2.3 WHAT NEEDS TO BE DONE?

- The phase out of OPG's coal-fired generating plants by 2007. (OCAA says 2010 at the latest)
- The adoption of stringent emission caps on other industrial sources of NO<sub>x</sub> and SO<sub>2</sub> to protect human health and the environment. This would imply reductions in emissions of 75% for SO<sub>2</sub> by 2015; and 75% for NO<sub>x</sub> by 2010.
- The reorientation of the province's transportation infrastructure investments in southern Ontario away from highways and towards public transit, with appropriate supportive land-use policies. (*See Chapter 4: Urban Sprawl and Smart Growth*)
- The revision of vehicle licencing fees to reflect vehicle weight and fuel efficiency.

### 2.2.4 FOR MORE INFORMATION

- Quentin Chiotti, Pollution Probe  
[www.pollutionprobe.org](http://www.pollutionprobe.org)
- Jack Gibbons, Ontario Clean Air Alliance  
[www.cleanair.web.ca](http://www.cleanair.web.ca)

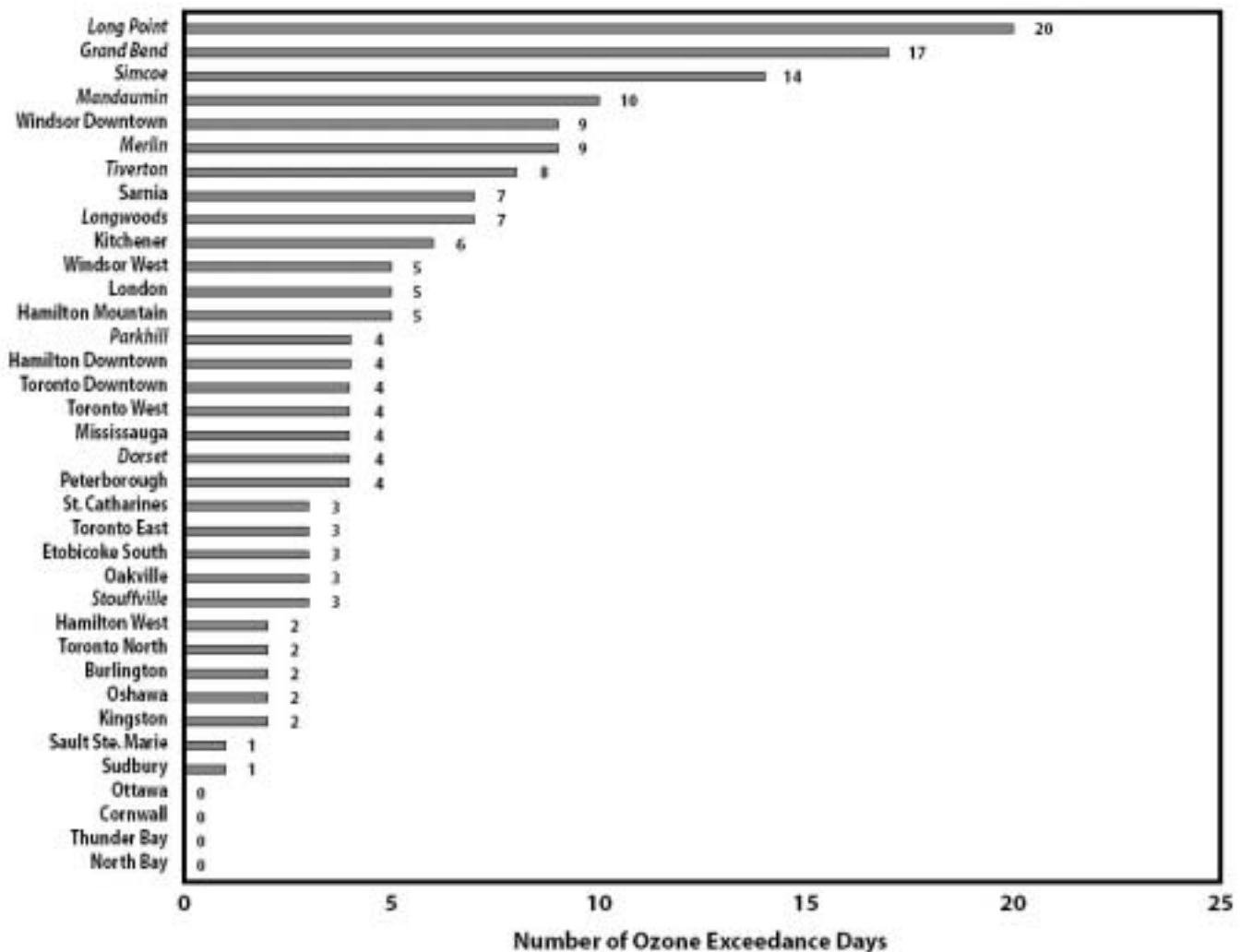
- Dan McDermott, Sierra Club  
[www.sierraclub.org](http://www.sierraclub.org)
- Keith Stewart, Toronto Environmental Alliance  
[www.torontoenvironment.org](http://www.torontoenvironment.org)
- John Wellner, Ontario Medical Association  
[www.oma.org](http://www.oma.org)
- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

## 2.3 AIR TOXICS

### 2.3.1 THE VITAL FACTS

- In addition to the impacts of smog, toxic air pollutants from industry heavily impact certain areas of the province.
- Large emissions of benzene, a carcinogen and a smog precursor, are associated with conventional steel mills in Hamilton and Sault Ste. Marie.

Figure 7: Number of Ozone Exceedance Days at Sites Across Ontario (2000)



- Large emissions of heavy metals including arsenic, nickel, and lead are associated with the metal smelting industry in Sudbury and Timmins. These facilities are also major sources of acid rain precursors (NO<sub>x</sub> and SO<sub>2</sub>).
- The leading sources of emissions of dioxins and furans (extremely toxic persistent pollutants) are waste incineration, steel and metals fabrication, coal-fired electricity generating facilities in southern Ontario, and metal smelting facilities in Northern Ontario.
- Waste incinerator, and coal-fired electricity generating facilities are the major sources of emissions of mercury.

- Information on releases of pollutants in Ontario can be obtained from [www.pollutionwatch.org](http://www.pollutionwatch.org).
- Information on the health and environmental impacts of specific pollutants can be obtained at <http://www.scorecard.org/chemical-profiles/>.

### 2.3.2 THE KEY ISSUES

- Measures to address air toxics have been absent from the province's clear air initiatives. The new emission standards for the electricity and metal smelting sectors have been silent on heavy metal and dioxin and furan emissions, even though the sectors are major sources of these pollutants.

- The government has been proceeding slowly with its revisions to its standards for hazardous air contaminants, first announced in 1997. Proposals by the Ministry of the Environment (MOE) to greatly strengthen emission standards for a number of heavy metals, including nickel and arsenic, have not been adopted.

- Emissions of toxic substances are included in Ontario's emission reporting system, launched in June 2002.

<http://www.ene.gov.on.ca/environet/onair/splash.htm>

- The province has moved to apply the Canada-Wide Standards for dioxins and furans and mercury to some waste incineration facilities.<sup>8</sup> This resulted in the December 2002 shut-down of the SWARU energy-from waste facility in Hamilton due to its inability to meet the dioxins and furans standards.

- Ontario blocked progress on the development of a Canada-Wide Standard for mercury emissions from electric power plants for several years due to concerns over the implications for OPG's coal-fired plants. A draft standard, proposing targets of between 60 and 90% reductions in emissions by 2010 was released by the Canadian Council of Ministers of the Environment in June 2003.

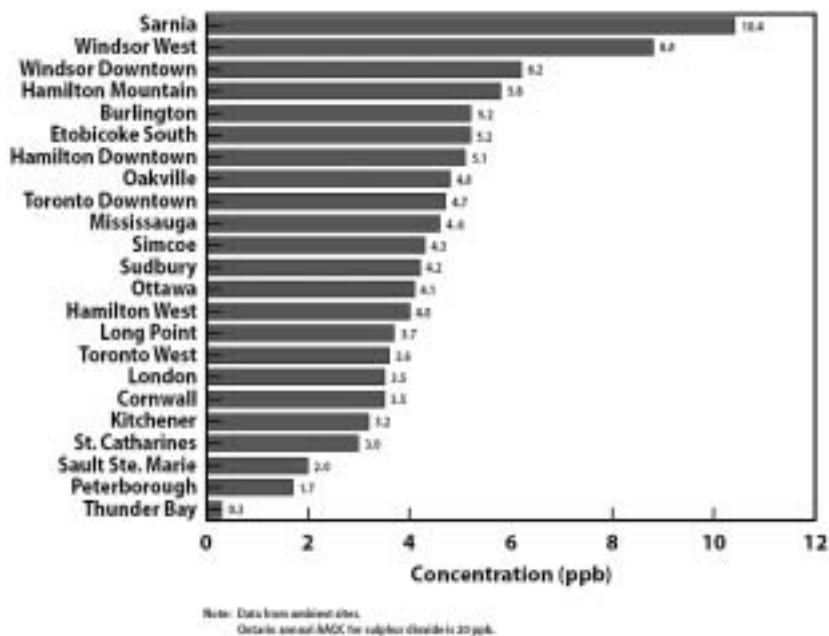
### 2.3.3 WHAT NEEDS TO BE DONE?

- The adoption of modern emissions standards for heavy metals and other air toxics, measured at the point of emission, for all types of facilities, including provisions for dealing with the cumulative effects of multiple sources.

### 2.3.4 FOR MORE INFORMATION

- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)
- Keith Stewart, Toronto Environmental Alliance  
[www.torontoenvironment.org](http://www.torontoenvironment.org)

Figure 8: Annual Sulphur Dioxide Means (2000)



## 2.4 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

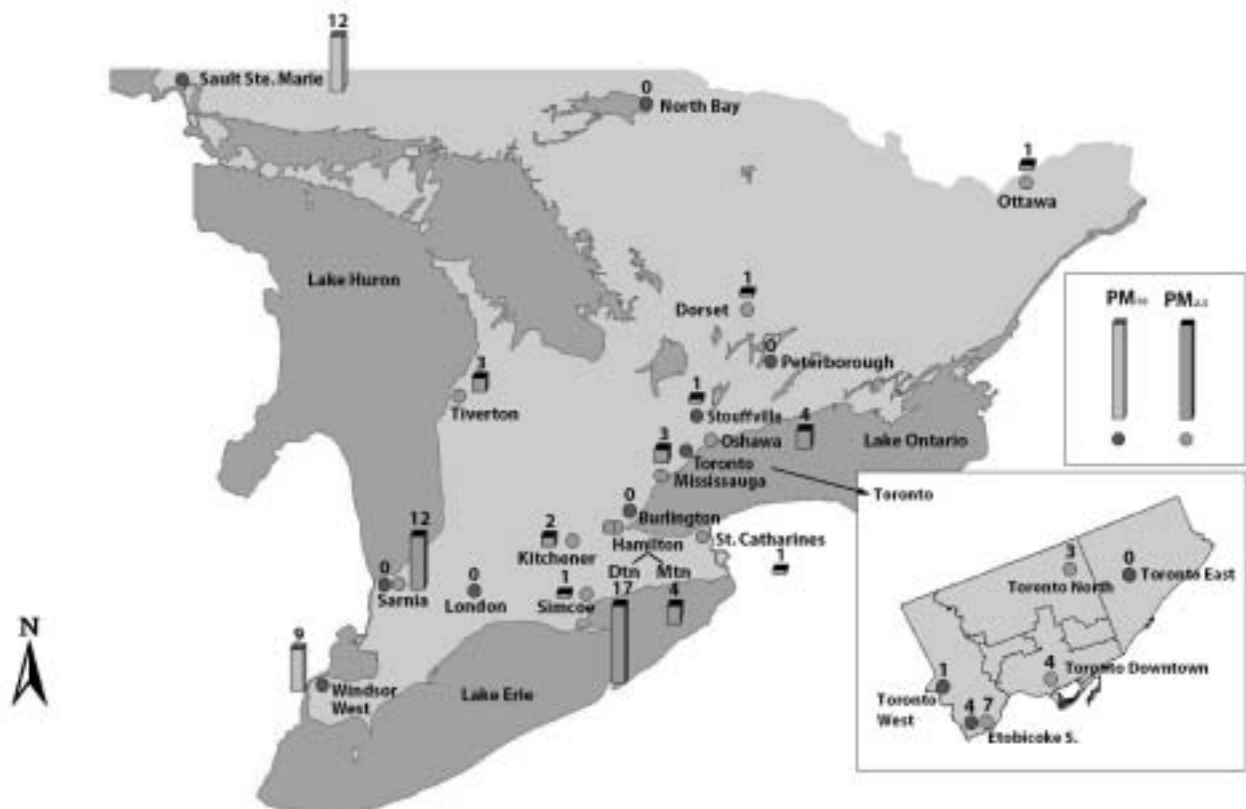
### 2.4.1 THE VITAL FACTS<sup>9</sup>

- Ontario is Canada's second largest generator of Greenhouse Gases (GHG), only slightly behind Alberta in total emissions (197 megatonnes of carbon dioxide (CO<sub>2</sub>) equivalent<sup>10</sup> vs 200 megatonnes for Alberta)
- Ontario accounts for 29% of Canada's total GHG emissions.
- The leading sources of GHG emissions in Ontario are:
  - *Transportation* 28%
  - *Industry* 28%
  - *Electricity and Steam Generation*: 18%
  - *Emissions from buildings* 14%
  - *Emissions from other human activities (agriculture, waste disposal)* 11%
- GHG emissions rose 7.7% between 1990 and 1998, and are projected to rise 17% between 1990 and 2010.

8. To date the standards have only been applied to the Clean Harbours/Safety-Kleen hazardous waste incinerator in Corunna, and the SWARU energy from waste facility in Hamilton.

9. Pembina Institute, Provincial Government Performance on Climate Change 2001, September 2001.

10. The Kyoto Protocol identifies six greenhouse gases: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). GHG emissions are usually measured in terms of CO<sub>2</sub> equivalents.

Figure 9: Geographical Distribution of PM<sub>10</sub>/PM<sub>2.5</sub> Exceedance Days Across Ontario (2000)

Note: Ontario Interim 24-Hour PM<sub>10</sub> AAQC is 50 µg/m<sup>3</sup>.  
Proposed Canada-Wide Standard for 24-Hour PM<sub>2.5</sub> uses 30 µg/m<sup>3</sup>.

- The projected impacts of climate change on Ontario include:<sup>11</sup>

- Increased incidences of severe weather;
- Accelerated deterioration of infrastructure due to weather effects;
- Smog episodes of greater intensity and frequency as a result of increased summertime temperatures;
- More severe impacts on human health and agriculture due to the combination of increased heat and smog; and
- Reductions in water supply in southern Ontario from both groundwater and surface sources.

## 2.4.2 THE KEY ISSUES

- The province has included GHG's in its air emission inventory.
- Ontario's position on the ratification of the Kyoto Accord has been the subject of major debate.
- Ontario's major sources of smog precursors, particularly nitrogen oxides, are largely the same as those of its GHG emissions: the burning of fossil fuels for industrial purposes, electricity generation and transportation. The use of fossil fuels for transportation purposes accounts for 63% of the province's total nitrogen oxide emissions<sup>12</sup> and 29% of its carbon dioxide emissions.<sup>13</sup> The transportation

11. Environment Canada, The Canada Country Study: Climate Impacts and Adaptation, Ontario Region Executive Summary, <http://www.on.ec.gc.ca/canada-country-study/intro.html>, viewed December 10, 2002. See also O.Chiotte et al., Towards An Adaptation Action Plan: Climate Change and Health in the Toronto-Niagara Region (Toronto: Pollution Probe Foundation, October 2002).

12. See <http://www.ene.gov.on.ca/envision/news/102401fs.htm>.

13. Bramley and Robertson, Provincial Government Performance on Climate Change: 2001, pg.33.

sector is also where the largest growth in GHG emissions is projected for Ontario in the future.<sup>14</sup>

- This implies a significant potential for multiple benefits from GHG emission reduction measures in Ontario.
- Reductions in emissions from transportation sources are a major factor in projected health co-benefits associated with Kyoto implementation in Ontario, valued at between \$200 million and \$300 million per year.<sup>15</sup>
- As an energy-consuming versus energy-producing province, increases in energy efficiency strengthen the competitiveness of Ontario's economy.
- New investments in more sustainable transportation infrastructure are also a major factor in the Government of Canada's projections of positive overall impacts of Kyoto implementation measures on the Ontario economy.<sup>16</sup>

#### 2.4.3 WHAT NEEDS TO BE DONE?

- The adoption of a commitment to meet or exceed Canada's GHG emission reduction commitments under the Kyoto Protocol.
- The reorientation of the province's transportation infrastructure investments in southern Ontario away from highways and towards public transit, with appropriate supportive land-use policies. (*See Chapter 4: Urban Sprawl and Smart Growth*)
- The adoption of GHG emission caps on major industrial sources of GHGs in conjunction with the federal government.
- Aggressive energy efficiency requirements should be incorporated into the Ontario Building Code.
- The adoption of measures to promote low-impact renewable energy sources as outlined in the *Energy* section of this document.

#### 2.4.4 FOR MORE INFORMATION

- John Bennett, Sierra Club  
[www.cleanair.web.ca](http://www.cleanair.web.ca)
- Jack Gibbons, Ontario Clean Air Alliance  
[www.cleanair.web.ca](http://www.cleanair.web.ca)
- Keith Stewart, Toronto Environmental Alliance  
[www.torontoenvironment.org](http://www.torontoenvironment.org)
- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

14. Analysis and Modeling Group, Canada's Emissions Outlook: An Update (Ottawa: National Climate Change Process, December 1999), table Ont-17. Transportation sector emissions are projected to rise by a factor of 1.3 (57 megatonnes CO<sub>2</sub> equivalent to 75 megatonnes, 2000-2020). Projected increases from the power generation sector, the sector with the next nearest growth over the same period are 1.15 times (27 megatonnes CO<sub>2</sub> equivalent to 31 megatonnes, 2000-2020). The importance of action transportation based emissions has been further enhanced by the province's commitments to convert Ontario Power Generation's coal fired generating plants to natural gas by 2015, which will result in significant reductions in emissions of smog precursors and GHGs from those sectors.

15. Environmental and Health Impacts Subgroup, The Environmental and Health Co-Benefits of Actions to Mitigate Climate Change (Ottawa: Analysis and Modeling Group, National Climate Change Process, November 2000). See also O. Ghiotti and N. Urquiza, The Relative Magnitude of the Impacts and Effects of GHG-Related Emission Regulations (Toronto: Pollution Probe and Rainmakers Environmental Group, 1999); The Municipalities Table, Final Report (Ottawa: National Climate Change Process, December 1999), pp.39-42.

## 3. WATER

### 3.1 INTRODUCTION

The May 2000 Walkerton disaster, in which seven people died and 2,300 were made seriously ill as a result of bacterial contamination of the town's water supply focused intense public attention on the safety and security of Ontario's drinking water supplies.

The Judicial Inquiry into the tragedy, led by Mr. Justice Dennis O'Connor, completed and tabled its final report in May 2002. The Inquiry concluded that the disaster was a result of a combination of incompetence on the part of the operators of the Walkerton water system, and systemic failures by the province to protect the sources of drinking water and to adequately oversee and regulate the operation of local drinking water systems.

### 3.2 SAFE DRINKING WATER

#### 3.2.1 THE VITAL FACTS

- The Walkerton disaster highlighted a number of gaps in the provincial regulatory system for drinking water. These included:<sup>17</sup>

— *The lack of mandatory training and certification requirements for drinking water system operators.*

— *The provision of drinking water standards and operating procedures through non-enforceable guidelines rather than enforceable regulations.*

— *The lack of any provincial regulatory structure at all for privately owned and operated drinking water systems. It has been estimated that there are 4,500 such systems in Ontario.*

— *The creation of major gaps in the monitoring and reporting system for contamination of drinking water as a result of the closure of MOE regional laboratories and abandonment of drinking water testing services in 1996.*

— *The general breakdown of the province's inspection and oversight system for drinking water in the face of the major budget cuts to the MOE between 1995 and 1998 (See Chapter 8: Governance)*

— *The lack of a provincial strategy and legislative and policy framework to protect sources of drinking water.*

— *Incidences of contamination of drinking water continue to occur: 533 adverse water quality reports were provided to the MOE under regulations adopted after Walkerton in 2002. 68.5% of the reports related to groundwater; 39% involved e.coli contamination; and 43% related to high total coliform bacteria counts*<sup>18</sup>

#### 3.2.2 THE KEY ISSUES

- The province moved to address a number of the more obvious gaps in its regulatory framework for drinking water protection, including requirements for mandatory notification of the MOE and local Medical Officers of Health by laboratories in the event of findings of adverse water samples through its July 2000 Drinking Water Regulation.
- The *Safe Drinking Water Act (SWDA)*, of December 2002, provides a framework for provincial oversight of drinking water operations.
- A new regulation was enacted in May 2003 phasing in approval, licencing and training requirements for operators, minimum levels of treatment, and sampling and testing procedures beginning in July 2003 for municipal residential systems, and ending in July 2005 for small, non-residential private systems.
- The regulation has been subject to a number of major criticisms including:<sup>19</sup>
  - *The failure to update the provincial standards for drinking water quality.*
  - *The government's failure to update training and certification requirements for drinking water system operators.*
  - *The lack of requirements for SWDA approvals, or the use of certified operators or accredited labs for non-municipal drinking water systems. Non-municipal systems are required to obtain engineer's reports re: their compliance with SWDA requirements.*

17. O'Connor, Report of the Walkerton Inquiry, Parts I and II, January 2002 and May 2002.

18. K. Donovan, "Reports of bad water soar," The Toronto Star, May 17, 2003.

19. CELA, Submission Re: Proposed Drinking Water Regulation under the Safe Drinking Water Act, 2002, March 2003.

- Even among municipal systems, only two classes ('municipal-residential' and 'small municipal-residential'<sup>20</sup>) are required to obtain **SWDA** approvals.
- A weak compliance framework, which permits systems that exceed drinking water standards to be 'deemed' to be in compliance.
- The weakness of the provisions regarding public access to information on drinking and source water quality.

### 3.2.3 WHAT NEEDS TO BE DONE?

- Completion of implementation of the **Safe Drinking Water Act** and other recommendations of the Walkerton Inquiry. Specifically:<sup>21</sup>
  - Update and modernize training and certification requirements for drinking water system operators
  - Review and update the province's drinking water quality standards, under the guidance of the advisory committee provided for in the **Act**.
  - Require **SWDA** approvals for all municipal drinking water systems.
  - Require that engineers' reports on non-municipal systems be subject to public review and MOE review and acceptance.
  - A strengthened compliance framework.
  - Strengthened community right-to-know provisions, including the preparation and distribution of consumer confidence reports on drinking and source water quality, as is the case under the **United States Safe Drinking Water Act**.

## 3.3 SOURCE WATER PROTECTION

### 3.3.1 THE VITAL FACTS

- The quality of the sources of Ontario's drinking water (surface and groundwater) is subject to a number of threats. These include:
  - Conventional (i.e. suspended solids and biological oxygen demand) and chemical contaminants in industrial discharges.

- Conventional, chemical and biological (e.g. *e.coli*, fecal coliforms, and cryptosporidium) contaminants in discharges from municipal sewage treatment plants and combined sewer overflows.
- Conventional, chemical and biological contaminants in run-off from urban areas (e.g. from roads and parking lots).
- Conventional (silt, soil), chemical (e.g. fertilizer and pesticides), biological (e.g. manure) contaminants from agricultural sources.
- Major reductions in industrial discharges were achieved in the 1990s due to the Municipal-Industrial Strategy for Abatement (MISA) program of discharge regulations initiated in 1986 and completed in 1995 and federal regulations on discharges from the pulp and paper industry adopted in the early 1990s.<sup>22</sup>

- The Walkerton disaster focused attention on the growing significance of agricultural pollution of the province's surface and groundwaters, particularly in the context of the rapid expansion of the intensive livestock industry in the province. The emergence of the sector as a leading source of pathogens and nutrients in surface and groundwater in southern Ontario was recognized by the MOE as early as 1992.<sup>23</sup>

### 3.3.1 THE KEY ISSUES

- Justice O'Connor made source water protection a central theme of Part II of the Walkerton Inquiry, seeing it as a central component of a multiple barrier system for protecting drinking water.<sup>24</sup>
- The province has only taken a few preliminary steps towards implementation of Justice O'Connor's vision of a source water protection system.
- Source water protection issues were not included in the December 2002 **Safe Drinking Water Act**.

— The **Sustainable Water and Sewerage Services Act**, enacted at the same time, was amended at committee to permit municipalities to charge for costs of protecting source waters as part of its overall framework for cost recovery for sewer and water services.<sup>25</sup>

— An Advisory Committee on Watershed Based Source Water Protection Planning was established in November 2002, and tabled its report in April 2003. The report

20. These systems are subject to reduced microbiological testing requirements. See EBR Registry Notice RA03E001 July 7, 2003.

21. CELA, Submission Re: Proposed Drinking Water Regulation under the Safe Drinking Water Act, 2002, March 2003.

22. See, for example, Commission for Environmental Cooperation, Taking Stock 2000 April 2003.

23. See MoE, 1992 Status Report on Ontario's Air, Water and Waste unpublished, released to the public in 1997.

24. O'Connor, Report of the Walkerton Inquiry, Part II, Part II, pgs 6 and 89.

25. Sustainable Water and Sewerage Services Act, 2002, s.1(definitions), s.1(2), 1(3), s.3(7) and 4(7).



*expands on the elements of a system outlined by Justice O'Connor in his report and included recommendations for the adoption of legislation mandating watershed based source water protection planning*

— The **Nutrient Management Act**, enacted in June 2002, provided a framework for the regulation of non-point source pollution related to nutrients from agricultural, industrial and municipal sources.

— Implementation of the regulations that specify the application and content of nutrient management planning requirements was delayed until July 1, 2003, and the requirements will not come into force for existing large livestock farms until 2005. Other farms will not be covered until 2008 “at the earliest.”<sup>26</sup>

— The **Act** is to be administered by the Ministry of Agriculture and Food rather than the MOE, as recommended by the Walkerton Inquiry.<sup>27</sup>

— The **Act** also limits the ability of local government to establish nutrient management requirements beyond those established by the province.

- The Walkerton Inquiry and Advisory Committee on Watershed-Based Source Water Protection Planning envisioned a significant role for Conservation Authorities in watershed planning.
  - Conservation authorities suffered severe reductions in provincial funding (up to 70% from 1995 and 1996 onwards)<sup>28</sup> and resources have not been provided to reflect an enhanced role in source water protection for the Authorities.
- The 1986 MISA program, which resulted in major reductions in industrial discharges to surface water, was originally intended to be extended to municipal sewerage treatment plants, and industrial facilities that discharge into municipal sewers. However, this stage of the program was never implemented.
- The MOE unsuccessfully attempted to block the adoption of a strong sewer use by-law by the City of Toronto, which includes pollution prevention planning requirements.

### 3.3.3 WHAT NEEDS TO BE DONE?

- Implementation of a watershed-based source water protection system, as recommended by Justice O'Connor and the Advisory Committee on Watershed-Based Source Protection Planning. This would include:
  - The adoption of source water protection legislation administered by the MOE.
  - The establishment of an Watershed Protection Branch within the Ministry.
  - The provision of financial resources to the Ministry and Conservation Authorities for the development, maintenance and implementation of source water protection plans.
- Implementation of nutrient management planning requirements under the **Nutrient Management Act**, and water protection plans, including all large and intensive farms and all farms in areas identified as sensitive or high risk by the applicable source protection plan, as recommended by Mr. Justice O'Connor as soon as possible. These provisions should be administered by the MOE, not the Ministry of Agriculture and Food.
- The completion of the aspects of the MISA program to control discharges from municipal sewage treatment plants and industrial discharges to sewers.

## 3.4 WATER TAKINGS AND SUSTAINABLE WATER USE

### 3.4.1 THE VITAL FACTS

- Even prior to Walkerton, the Provincial Auditor and the Environmental Commission had both highlighted in their annual reports the lack of an effective framework to protect the quality of groundwater and ensure that water was not taken from aquifers faster than they could recharge.
- A number of high profile water takings cases, including the approval of a water taking from Lake Superior for the purpose of export in 1998, the approval of large water takings for bottling purposes in areas of the province suffering from droughts

26. Ministry of Agriculture and Food, “Eves government responds to public consultations with new direction on nutrient management,” Press Release, March 21, 2003

27. O'Connor Park II: A Strategy for Safe Drinking Water, Recommendation 11.

28. CIELAP, Ontario's Environment and the 'Common Sense Revolution,' A Four Year Report, September 1999.



(Artemisia), and for industrial purposes (OMYA – Perth) have further highlighted the lack of an overall policy framework to control water takings and ensure the sustainability of water supplies.

### 3.4.2 THE KEY ISSUES

- The MOE continues to lack a watershed-based method to assess the cumulative impacts of water takings on the sustainability of water supplies, and ecosystem health.
- The Ministry also lacks the authority to impose bans on water takings from ecologically sensitive water bodies or water bodies where there are water shortages.
- The Minister of the Environment recent granted a “phased” permit to OMYA Canada in Perth, giving the company a future right to take water beyond its current needs from the Tay River. In issuing the permit, the Minister overturned an Environmental Review Tribunal decision against such a phased approach.
- The province has yet to complete a groundwater monitoring network, despite consistent recommendations from the Provincial Auditor and Environmental Commissioner to do so.
- The MOE has recently proposed amendments to its regulations dealing with water taking permits, requiring among other things, reporting on water use by permit holders, and recording and reporting of the actual amounts of water taken. However, certain types of water takings, such as those for agriculture, would continue to not require permits or to report the amounts of water taken.<sup>29</sup>

### 3.4.3 WHAT NEEDS TO BE DONE?<sup>30</sup>

- The establishment of methods to ensure consideration of the cumulative effects of permits to take surface and ground water in the water taking approval process, such as water budgets for each watershed and significant sub-watershed.

- The establishment of requirements for reporting and recording of all significant water takings, including agricultural takings, and the establishment of a system to provide ready access to this information to the Ministry and the public.
- The termination of the practice of granting “phased” permits for water takings.

## 3.5 THE GREAT LAKES

### 3.5.1 THE VITAL FACTS<sup>31</sup>

- The restoration of the health of the Great Lakes, the source of drinking water for many of Ontario’s cities has been a major focus since the signing of the Great Lakes Water Quality Agreement in 1968.
- Significant progress has been made in reducing industrial discharges to the lakes since then, particularly in Ontario as a result of the MISA program.
- Agricultural and urban non-point source pollution, combined sewer overflows for municipal sewage treatment systems, invasive species and habitat loss are now identified as the key threats to the health of the lakes and the quality of their waters.
- Canada’s obligations under the Great Lakes Water Quality Agreement are fulfilled through a series of agreements signed between the Ontario and federal governments (Canada-Ontario Agreements or COAs).

### 3.5.2 THE KEY ISSUES

- The budget cuts to the Ministries of the Environment and Natural Resources from 1995 onward led to Ontario’s effective withdrawal from many of its obligations under the Canada-Ontario Agreement on the Great Lakes Basin Ecosystem signed in 1994.
- The province’s actions were a significant factor in the failure of the Parties to meet the goals of the 1994 Agreement by the time of its expiry in March 2000.<sup>32</sup>

29. See, CELA, Submission on Proposed Amendments to the Water Taking and Transfer Regulation, May 2003.

30. See, CELA, Submission on Proposed Amendments to the Water Taking and Transfer Regulation, May 2003.

31. See generally, Report of the Commissioner for Environment and Sustainable Development 2001 Report to the House of Commons, October 2001, Chapter 1, [http://www.oagbvg.gc.ca/domino/reports.nsf/html/c101menu\\_e.html](http://www.oagbvg.gc.ca/domino/reports.nsf/html/c101menu_e.html)

32. CIELAP, Troubled Waters, March 1999.

- A new Agreement was signed by Canada and Ontario in March 2002, following a two-year delay largely attributed to the province.
- The 2002 Agreement includes specific obligations by Canada and Ontario in relation to certain activities, but does not include specific financial obligations on the part of the Parties.

### 3.5.3 WHAT NEEDS TO BE DONE?

- Non-point source pollution strategies to control agricultural and urban run-off.
- Specific commitments of resources to all provincial activities in the March 2002 COA.

### 3.5.4 FOR MORE INFORMATION

- Anne Mitchell, Canadian Institute for Environmental Law and Policy  
[www.cielap.org](http://www.cielap.org)
- Paul Muldoon  
Canadian Environmental Law Association  
[www.cela.ca](http://www.cela.ca)
- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

# 4. SMART GROWTH AND URBAN SPRAWL

## 4.1 INTRODUCTION

The past few years have been characterized by growing public concern over urban sprawl in southern Ontario, particularly in the Greater Toronto Area, as highlighted by recent debates over the protection of the Oak Ridges Moraine. The low-density patterns of development proliferating throughout the region are seen to result in: an unattractive and inefficient use of urban land and resources, excessive infrastructure costs, and the loss of prime farmland, green space and environmentally sensitive areas.

At the same time, there has been increasing awareness of the serious air quality problems in southern Ontario and their severe impacts on human health. These concerns have been further highlighted by the public debates over Ontario’s role in the ratification of the Kyoto Protocol, as transportation-related emissions are major contributors to the province’s smog problem and greenhouse gas releases.<sup>33</sup>

Transportation sources are projected to be the source of the largest growth in emissions of smog precursors and greenhouse gases in Ontario in the future.<sup>34</sup> Current urban development patterns are reinforcing this trend; a key characteristic of the low-density developments occurring in southern Ontario is the forcing of almost total reliance on the automobile as a means of transportation, resulting in increased congestion, pollution and reduced economic efficiency.

Smart Growth policies, in contrast to conventional approaches to urban development, emphasize more compact development patterns where land-uses are mixed and alternatives to the automobile are viable transportation options. Development is focused in existing urban areas rather than expanding onto surrounding farmlands, and land-use, transportation and infrastructure planning is coordinated between different jurisdictions and stakeholders. Smart Growth policies have the potential to deliver multiple benefits to the region. These include improved air quality, reduced greenhouse gas emissions, protection of prime agricultural lands, ecologically significant areas and drinking water sources, and congestion relief, while reducing infrastructure construction and maintenance costs.

Figure 10: Comparing Smart Growth and Sprawl<sup>35</sup>

Feature	Smart Growth	Sprawl
<i>Land Use Density</i>	Higher density, clustered	Lower density, dispersed
<i>Development Location</i>	Infill (brownfields and greyfields)	Urban periphery (greenfields)
<i>Land Use Mix</i>	Well-mixed	Homogeneous, not mixed
<i>Transportation</i>	Multi-modal – supports walking, cycling and public transit	Automobile-oriented — poorly suited for walking, cycling and transit
<i>Streets</i>	Designed to accommodate a variety of activities — traffic calming	Designed to maximize motor vehicle traffic volume and speed
<i>Planning Process</i>	Planned — coordinated between jurisdictions and stakeholders	Unplanned — little coordination between jurisdictions and stakeholders

33. Ontario Ministry of the Environment and Energy Towards an Smog Plan for Ontario (Toronto: 1996), pg. 15 re: Sectoral Nitrogen Oxide and Volatile Organic Compound Emissions.

34. See, for example, Analysis and Modelling Group, Canada’s Emissions Outlook: An Update (Ottawa: National Climate Change Process, December 1999) Table Ont-17.

35. Adapted from T. Litmann, An Economic Evaluation of Smart Growth and TDM, pg.6.

## 4.2 THE VITAL FACTS

- Population of the Toronto centred region (defined as the area from Midland in the north, to Fort Erie in the south, Waterloo in the west and Peterborough in the east) is projected to grow from 7.4 million in 2000 to 10.5 million 2031, an increase of 43%.
- The continuation of current patterns of low density urban development (business as usual) in the Greater Toronto Area are projected over the next 30 years to result in the urbanization of a further 1070 square kilometers of land in the region. This is almost double the area of the City of Toronto and a 45% increase in the amount of urbanized land in the region.
- 92% of the land on which this urban growth will occur will be class 1,2, or 3 agricultural lands as classified by the Canada Land Inventory; 69% will be Class 1 land.
- Automobile ownership in the region will increase by 50% to 19 million vehicles.
- The value of delays due to traffic congestion, principally in the 905 region surrounding Toronto, will increase from about \$1 billion per year to \$3.8 billion per year. Daily vehicle km<sup>3</sup> of auto travel in the region will increase by 64%. The costs associated with automobile accidents, reflecting this increase in auto travel, will rise from \$3.8 billion in 2000 to \$6.3 billion.
- Reflecting the low levels of transit use in the regions outside relative to those in the City of Toronto (transit model share for Toronto: 28%; for surrounding area 5.4%), where most of the growth will occur, the total transit model share will decrease by 11%.
- Emissions of transportation related greenhouse gas emissions are projected to increase by 42%.
- \$33 billion in new investments will be needed in water and wastewater treatment infrastructure.
- \$43.8 billion in investment transportation infrastructure are projected between 2000 and 2031. 68% of these investments are projected to be in roads and highways under business as usual scenarios.

- Urban growth questions have also emerged as a significant issue in the Ottawa area.

## 4.3 THE KEY ISSUES

### 4.3.1 THE GOVERNMENT'S 'SMART GROWTH' INITIATIVE

- In response to public concerns over the environmental and transportation impacts of urban sprawl, Premier Harris announced a Smart Growth initiative in April 2001.
- The central feature of the Smart Growth initiative has been the creation of five multi-stakeholder regional Smart Growth advisory panels (North-western; Northeastern, Eastern, Western and Central)
  - *The Central Region Panel, which included the Greater Toronto and Niagara Regions, tabled its final report in April 2003.*
  - *The Northwestern Regional Panel reported May 5, 2003*
  - *The Northeastern Regional Panel reported May 27.*
- To date the Smart Growth initiative has produced few changes in provincial policies affecting urban growth and development.
  - *The major land-use planning and fiscal policies, adopted following the 1995 election, which have been critical factors in promoting and facilitating urban sprawl remain in place. These include:*
    - *The repeal of 1995 amendments to the **Planning Act** and accompanying Provincial Policy Statement. The 1995 provisions had flowed from the 1992 Report of the Commission on Planning and Development Reform, and were intended to curb urban sprawl, protect prime agricultural lands and ecologically significant areas and promote public transit.*
    - *The termination of provincial capital and operating support to public transit services in 1997.*
    - *The adoption of fiscal and taxation policies, such as the \$20 million/yr Land Transfer Tax and **Development Charges Act**, 1997 that encourage and facilitate urban sprawl.*

— *The transfer of responsibility for administration of the Niagara Escarpment Commission and Plan from the Ministry of the Environment to the Ministry of Natural Resources, and the appointment of pro-development members to the Commission.*

- An **Oak Ridges Moraine Conservation Act** was adopted in November 2001, along with a plan for future land-use in the region.

— *The legislation deals with the situation on the moraine on a one-of basis rather than as part of a more systemic approach to issues of urban development in Southern Ontario.*

— *Land-use decisions made under the Act have been criticized for transferring urban development onto other ecologically significant areas rather than reducing urban expansion as a whole.*

— *The province adopted a **Brownfields Statute Law Amendment Act** in November 2001 to address certain liability and financing issues associated with the remediation and redevelopment of contaminated lands.*

— *Policy framework on brownfields remains incomplete, especially with respect to the remediation of severely contaminated “orphan” sites whose remediation costs are likely to exceed their economic value.*

#### 4.3.2 SMART GROWTH AND HIGHWAY EXPANSION

- One of the central features of the government’s Smart growth initiative has been the SuperBuild Corporation’s \$1billion/yr program of highway expansion, concentrated in the GTA and the Niagara Peninsula.
- The highway building program is the largest single type of investment made by the Corporation, accounting for 77% of the Corporation’s transportation investments in 2002–03.<sup>36</sup> Transit, by comparison, accounted for 15%.
- The key initiatives include the following:
  - *the eastward extension of Highway 407 to Highway 35/115*
  - *the extension of Highway 404 around the east and south sides of Lake Simcoe*

— *the northward and eastward extension of Highway 427 to Barrie*

— *the construction of a new mid-peninsula highway from Burlington to Niagara Falls.*

— *the creation of a new east-west GTA transportation corridor north of the Oak Ridges Moraine<sup>37</sup>*

— *the extension of Highway 410 northwards “at least” to highway 89*

- The province has also set an overall target of increasing to over 90% the proportion of the provincial population living within 10 kilometres of a major provincial highway corridor.<sup>38</sup>
- The highway projects, which are presented by the province as centrepieces of its Smart Growth strategy,<sup>39</sup> constitute the most ambitious program of highway expansion in the province in more than 30 years.
- If completed, these expansions will lock into place decisions that commit Ontario to low-density, automobile- and road-dependent development patterns for the foreseeable future.
- On June 28, 2003, in response to litigation by the City of Burlington and Halton Region as well as opposition by many environmental organizations, and as a result of the Richmond Landfill Environmental Assessment decision of the Divisional Court (**See Governance section**), the government stated that it would revise the terms of reference for the Mid-Peninsula Highway, potentially to include consideration of need and alternatives.

#### **Bill 25 — The Smart Transportation Act**

- In May 2003, the government introduced Bill 25, the **Smart Transportation Act**.
- Among other things, the Bill would amend the **Ontario Planning and Development Act** to permit the Minister of Transportation to override local planning processes to designate transportation “corridors” (i.e. highways), exempt the identification of such “corridors” from the **Environmental Assessment Act** and bar court actions against the designation of corridors.

36. R. Mackie, “Queen’s Park hitches wagon to toll highways,” *The Globe and Mail*, June 6, 2001.

37. Ontario Ministry of Transportation, 2002–2003 Business Plan. The current stated goal is 93.7%.

38. See, for example, <http://www.mto.gov.on.ca/english/about/trnsmrtgro>.

39. An expenditure of \$359 million is projected in the province’s 2003/04 budget.

- In effect, the Bill would remove the planning of transportation infrastructure (i.e. highways) from the overall environmental and land-use planning process, the opposite of Smart Growth with its emphasis on the integration of transportation and land-use planning.
- The Bill was not enacted before the Legislature rose in June 2003, but the Ministry of Transportation has indicated its intention to continue to seek passage of the legislation.

#### 4.3.3 PROVINCIAL FUNDING FOR PUBLIC TRANSIT

- The province terminated provincial capital and operating support for public transit services in January 1997.
- A commitment of \$300 million per year over ten years in capital funding for public transit was announced in September 2001, although actual expenditures to date have been less than \$200 million per year,<sup>40</sup> principally targeted at the expansion of the GO transit system.
- On June 2, 2003 Premier Eves announced \$645 million in transit system improvements in the central region, to occur over the next five years.
  - *The announcement contained no funds for the Toronto Transit Commission, and involved extensions of GO service to Barrie, and the establishment of greater links with other cities at the outer edges of the central region, such as Peterborough, Kitchener-Waterloo, and Niagara Falls, which may actually encourage additional urban sprawl in these areas.*
  - *Doubts have been expressed as to whether the investments will actually occur, as the funds were not provided for in the province's 2003/04 budget.*

## 4.4 WHAT NEEDS TO BE DONE?<sup>41</sup>

- Amend the **Planning Act** to:
  - *Require local planning decisions be consistent with provincial policy*
  - *Provide a significant role for the Ministries of Environment and Natural Resources in planning process, and integrate land-use planning and watershed-based source water protection planning*
- Adopt a new Provincial Policy Statement under the **Planning Act** to
  - *Support development forms for which non-automobile transportation modes are viable, including mixed uses*
  - *Support intensification and minimum density requirements*
  - *Protect prime agricultural lands, ecologically significant areas and source water related lands*
  - *Eliminate the need for municipalities to hold reserves of non-urban lands for future development*
  - *Provide for urban containment boundaries.*
- Return responsibility for administration of the Niagara Escarpment Commission to the Ministry of the Environment from the Ministry of Natural Resources.
  - **Transportation and Infrastructure Funding**
  - *The adoption of a moratorium on 400 series highway expansion in the central region, pending an independent review of transportation and land-use requirements and completion of smart growth planning processes.*
  - *The re-orientation of provincial transportation investments from highways to transit in areas of the province experiencing high urban growth.*
  - *Provide provincial operating support to public transit services, through allocation of a portion of provincial gasoline tax revenues, and the provision of additional revenue sources to municipalities, such as parking lot levies.*

40. See Pembina Institute, Smart Growth in Ontario: Provincial Promise vs. Performance (March 2003) and FON, A Smart Future for Ontario, October 2002).

41. CIELAP, Open for Toxics, March 2003.

— Focus provincial infrastructure funding on the maintenance and upgrading of infrastructure in existing urban areas, including support for intensification, not the expansion of infrastructure to support new ‘greenfields’ development.

- Fiscal and Taxation Policy

— Remove incentives to urban sprawl, such as the Land Transfer Tax Rebate.

— Amend the **Development Charges Act** to require the internalization of full hard and soft infrastructure costs for new developments outside of existing urban areas, reflecting the real, site-specific costs.

— Provide incentives for higher value uses of vacant urban land and buildings, and underused urban lands, such as parking lots.

— Modify vehicle sales taxes and licencing fees on the basis of vehicle weight and fuel efficiency.

#### 4.4.1 FOR MORE INFORMATION

- Linda Pim, Federation of Ontario Naturalists  
[www.Ontarionature.org](http://www.Ontarionature.org)
- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)
- Chris Winter, Conservation Council of Ontario  
[www.cco.web.ca](http://www.cco.web.ca)

Figure 11: Planned and Proposed New Highways in the Toronto and Niagara Regions



## 5. WASTE

### 5.1 INTRODUCTION

Ontario's status as Canada's industrial heartland has always made it a focal point for the generation of hazardous wastes. Beginning in the mid-1990's Ontario saw a dramatic rise in hazardous waste imports for disposal from the US. This growth was attributed to the relative weakness of the province's hazardous waste disposal regulations relative to those in place in the US – in effect Ontario has been functioning as a 'pollution haven.' Ontario, as Canada's largest province, is also Canada's largest generator of municipal wastes. The disposal of municipal wastes from the Greater Toronto Area has emerged as a major domestic and international issue, while waste diversion programs continue to attempt to recover from the province's near abandonment of its waste diversion effort following the 1995 election.

### 5.2 HAZARDOUS WASTES

#### 5.2.1 THE VITAL FACTS

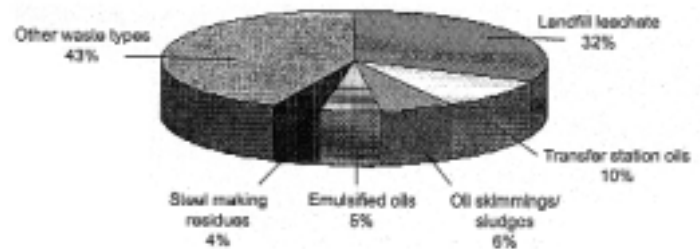
- There is currently no reliable figure of total hazardous wastes generation in Ontario, due to the absence of reporting requirements for on-site disposal by generating facilities. Estimates of 3-4 million tonnes per year are common.
- Analyses conducted by the Canadian Institute for Environmental Law and Policy indicates the following trends in terms of hazardous wastes in Ontario<sup>42</sup>:

#### *How much hazardous waste is generated in Ontario each year?*

- Hazardous wastes transferred off-site for disposal and tracked through the province's waste manifest system increased 35% between 1994 and 2000, from 1.3 million tonnes to 1.7 million tonnes. A 5% decline in transfers occurred between 1998 and 2000.

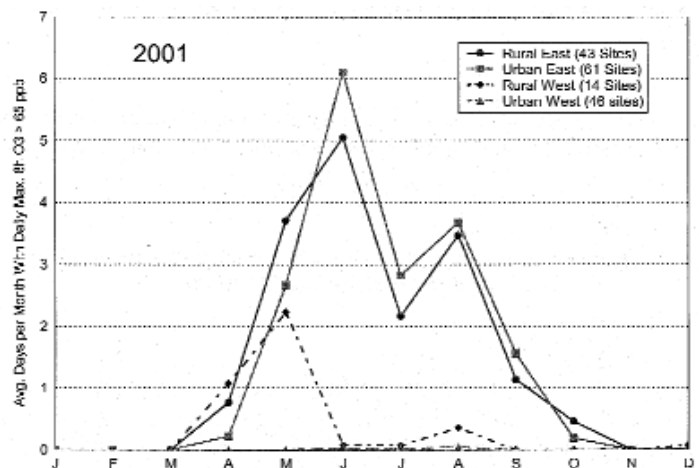
- Landfill leachates, a grossly polluted liquid produced as rainwater leaches through landfills, is the largest type of hazardous waste generated in Ontario, accounting for 32% of total generation. Waste oils and sludges, steel making residues (principally electric Arc Furnace dust), aromatic solvents, and materials collected in air and water pollution control systems constitute the major components of the non-leachate waste stream.

Figure 12: Waste types generated in Ontario as percentage of total hazardous waste generation, 2000



- Generation of non-leachate (i.e. industrial) waste is concentrated in the Greater Toronto Area and south-western Ontario, with Burlington, Hamilton, Ajax, St. Catherines, Guelph, Windsor and London being the leading sources of wastes.

Figure 13: Monthly distribution of the average number of days with daily maximum 8-hour average ozone concentration above 65 ppb, 2001



42. The 1993 figures includes both disposal and recycling as no differentiated figures are available from Environment Canada for 1993-1995. Disposal and recycling imports were roughly evenly split in the early 1990s, suggesting that current import levels for disposal may be 4x what they were in 1993.



***How much hazardous waste is disposed of in Ontario each year; what is it and where does it go?***

- In 2000 85% of hazardous wastes disposed of in Ontario were generated in Ontario. 12% came from the US and 3% from other provinces.
- According to data provided by Environment Canada Imports of hazardous wastes from the US for disposal grew dramatically after 1993, peaking in 1999 at 240,000 tonnes, and then dropping to 106,000 tonnes in 2001. This is nearly double the 1993 figure of 56,000 tonnes.<sup>43</sup>
- The largest imports in 2000 were waste oils and wastes from air and water pollution control systems.
- The largest sources of waste exports to Ontario were Michigan, New York and Ohio.
- The top receiving sites for hazardous wastes in Ontario are the Clean Harbours (formerly Safety-Kleen) Landfill and Incineration complex in Corunna and the oil and solvent recovery facility in Breslau.
- A major expansion of the Safety-Kleen/Clean Harbours landfill facility was approved in 1997.
- New PCB incineration facilities were approved in Northumberland County in 1997 and Cornwall in 1999. A further PCB incineration facility has been proposed for Kirkland Lake. A facility to remove PCBs from electrical equipment was approved in Kirkland Lake in 1998.

## 5.2.2 THE KEY ISSUES

### ➤ 5.2.2.1 HAZARDOUS WASTE DISPOSAL STANDARDS

- Differences in disposal standards for hazardous wastes between Ontario and the US have been identified as the key factor driving the dramatic increase in waste imports to Ontario since the early 1990s.<sup>44</sup>
- Ontario lacks prohibitions on the land disposal of untreated wastes, similar to those that were adopted in the US in the early 1990s.

- Ontario also lacks comprehensive modern operating and emission standards for facilities that incinerate hazardous wastes or burn them as fuel. Such standards were adopted in the US in 1999.
- Shipping wastes to Ontario allows US waste generators to escape liability for environmental damage arising from improper waste handling and disposal under US law.
- The province has adopted similar definitions to the US for hazardous wastes, including a derived-from rule, ensuring that wastes continue to be managed as hazardous even after they have undergone some form of treatment.
- The province promised to introduce land disposal restrictions on hazardous waste in December 2001. However, no further action has been taken on this initiative.
- Ontario has applied the Canada-Wide Emission Standards for mercury and dioxins and furans to the Clean Harbours incinerator in Corunna, and committed to apply these standards to other hazardous waste incineration facilities in the province, although this has yet to be done. It is important to note that the Canada-Wide Standards only deal with mercury and dioxin and furan emissions, while the US standards adopted in 1999 deal with a much wider range of pollutants.

### ➤ 5.2.2.2 DISPOSAL SITE APPROVALS

- Following the 1995 election, the province significantly weakened the approval process for hazardous waste disposal facilities. New PCB incineration facilities were approved in Northumberland County and Cornwall without review under the ***Environmental Assessment Act***, while the scope of the review of the proposed PCB incineration facility in Kirkland Lake under the Act was severely limited.
- The expansion of the Safety-Kleen landfill in Corunna in 1997 and the 1996 approval of a large non-hazardous industrial waste landfill in Stoney Creek, subsequently used to dispose of “treated” hazardous wastes, occurred without public hearings.

43. Texas Center for Policy Studies, CIELAP, The Generation and Management of Hazardous Wastes and Transboundary Hazardous Waste Shipments between Mexico, Canada and the United States 1990-2000, May 2001.

44. ECO, 2001-2002 Annual Report, October 2002, pg.95.

- The expiry of the *Intervener Funding Project Act* in 1996 has made it difficult for community groups to intervene effectively in hazardous waste disposal site approval processes.

### ➤ 5.2.2.3 HAZARDOUS WASTE INFORMATION

- The province introduced requirements for annual registration of hazardous waste generators and reporting on the amounts of wastes disposed of in January 2002. This was intended to address the lack of information regarding on-site disposal of hazardous wastes. The Environmental Commissioner and others have been critical of the quality and reliability of the information that they system will generate, and the reporting exemptions for wastes that are to be 'recycled.'<sup>45</sup> No data has been made publicly available through the system to date.
- A system of modest charges for hazardous waste generators and shippers was also introduced in January 2002. The charges are insufficient to provide incentives for waste reduction to waste generators.

### 5.2.3 WHAT NEEDS TO BE DONE?

- Adopt restrictions on the land disposal of untreated hazardous wastes, similar to the standards in place in the US.
- Adopt comprehensive, modern operating and emission standards for hazardous waste incineration facilities and other facilities burning hazardous wastes as fuels.
- Adopt appropriate operating standards for other types of hazardous waste handling and disposal facilities.
- Subject all proposed new or expanded hazardous waste disposal facilities to full environmental assessments under the *Environmental Assessment Act* including considerations of need and alternatives. Provide for intervenor funding for public interest and community intervenors in the approval process.
- Require all hazardous waste generators to report comprehensively each year on their total waste generation, waste composition and fate, including on and off-site recycling or disposal.

- Restrict the scope of the exemptions for hazardous waste recycling operations from hazardous waste approval requirements, and establish reporting requirements and operating for hazardous waste recycling facilities, including standards regarding the on-site storage of wastes.

- Increase the level of the province's hazardous waste charges, with higher charges for priority waste, and use the resulting revenues to finance waste reduction/pollution prevention programs, and contaminated site remediation.
- Adopt pollution prevention planning legislation, similar to that adopted in many US states, to require industrial facilities to work to reduce their generation of hazardous waste.

### 5.2.4 FOR MORE INFORMATION

- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)
- Anne Mitchell, Canadian Institute for Environmental Law and Policy,  
[www.cielap.org](http://www.cielap.org)

## 5.3 MUNICIPAL SOLID WASTE WASTES

### 5.3.1 THE VITAL FACTS

- Ontario residents generate 650 kilograms of municipal solid waste per year.
- Blue Box waste generated in 2001 included:<sup>46</sup>
  - 724,000 tonnes of printed paper
  - 265,000 tonnes of paper packaging
  - 126,000 tonnes of laminants
  - 167,000 tonnes of plastics
  - 68,000 tonnes of steel
  - 28,000 tonnes of aluminum
  - 176,000 tonnes of glass

For a total of 1,554,000 tonnes of waste.

45. Waste Diversion Ontario and Stewardship Ontario, Blue Box Program Plan February 2003, Table 6-3.

46. 1992 Figures from MoE.

- Of this 699,000 tonnes were diverted and marketed.
- Approximately 40% of Ontario's municipal solid waste comes from residential sources; 60% comes from industrial, commercial and institutional sources (IC&I).<sup>47</sup>
- The most recent estimates of the composition of Ontario's municipal solid waste stream available are as follows:<sup>48</sup>

Figure 14: Residential Sector

Category	Examples	Percentage by weight
<i>Organics</i>	Kitchen and yard waste	31.6
<i>Paper</i>	newspapers, fine paper, magazines, phone books, tissue etc.	29.9
<i>Packaging</i>	Boxboard, corrugated cardboard, glass, steel, aluminum and plastic containers	19.5
<i>Other</i>	Textiles, leather, rubber, pet litter, ceramics, etc.	
<i>Diapers</i>		2.8
<i>White goods</i>	Stoves, refrigerators	2.5
<i>Demolition and construction materials</i>		1.6
<i>Wood</i>		1.2

Figure 15: Industrial, Commercial and Institutional Sector

Category	Examples	Percentage by weight
<i>Cardboard</i>		23
<i>Other</i>	Textiles, leather, ceramics, rubber, misc. ferrous and plastic products	22
<i>Wood</i>	Pallets, misc. wood material	19
<i>Paper</i>	Newsprint, fine paper, magazines, telephone books etc.	13
<i>Metal</i>	Steel, aluminum, iron, etc.	10
<i>Organics</i>	Food and yard waste	6
<i>Glass</i>		5
<i>Plastic</i>		5

- There is one operating energy-from-waste facility in Ontario: The Peel Resource Recovery Facility. The second facility, the SWARU facility in Hamilton, was shut down in December 2002, due to its inability to meet the Canadian Council of Ministers of the Environment Canada-Wide Standards for dioxin and furan emissions.
- Municipal residential waste diversion rates have been stalled at about 35% since the mid-1990s.<sup>49</sup> This is short of the goal of 50% diversion by 2000 set by the provincial government in 1987 and reaffirmed in 1992.

47. Figures provided by Ministry of the Environment Waste Reduction Office, 1991, based on 1987 figures.

48. Recycling Council of Ontario, Recycling Trends in Ontario, March 2000.

49. PMoloney, "Wanted" Backupsite for city garbage," The Toronto Star, July 23, 2003; G.Taylor, "Political hay from garbage," The Toronto Star, July 30, 2003.

### 5.3.2 THE KEY ISSUES

#### ➤ 5.3.2.1 WASTE DIVERSION

- Regulations adopted in 1994 required all municipalities with a population of 5,000 or more to provide recycling and composting programs. As a result, 99% of Ontario households were provided with access to waste diversion services.
- The province abandoned virtually all of its municipal solid waste diversion programs, and proposed to repeal waste diversion regulations related to the commercial and industrial sector following the 1995 election.
- As a result of continuing municipal concerns regarding the costs of blue box recycling programs, and the inconsistent of financial contributions to the programs of companies responsible for the packaging and other materials collected through the programs, the province initiated consultations on the funding of diversion programs in 1998.
- In June 2002, the **Waste Diversion Act** was enacted. The **Act** provides for the creation of Waste Diversion Ontario (WDO), a non-governmental corporation, with a board of directors comprised of industry, municipal and non-governmental representatives.
- The **Act** gave WDO the mandate to develop, implement and operate waste diversion programs—to reduce, reuse or recycle waste for waste materials designated by the minister. Waste diversion programs are developed by WDO in accordance with a minister's request and, once submitted, must be approved by the minister before they can be implemented.
- The Minister of the Environment issued a letter to WDO in September 2002, requiring that WDO to develop a waste diversion program for Blue Box waste (i.e. glass, metal, paper, plastic, and textiles), in cooperation with an industry funding organization. Stewards (i.e. brand owners or first importers of products that are the source of Blue Box wastes) are required under the **Act** to pay fees established by the industry funding organization.
- The proposed program was submitted for the minister's approval in March 2003. The program is intended to provide 50% of the net costs of municipalities for Blue Box programs and is awaiting final approval by the minister.

- WDO has also been directed by the minister to establish diversion programs for used tires and used oil.
- The WDO system limits industry contributions to 50% of waste diversion program costs, reducing incentives for waste reduction or packaging redesign to facilitate recycling or reuse.
- The system allows industry to avoid the adoption of refillable containers, such as refillable PET bottles for soft drinks.
- Access to information and assessments of the system performance by legislative officers and the public may be difficult given the non-governmental status of the WDO.

#### ➤ 5.3.2.2 TORONTO/GTA WASTE DISPOSAL

- One of the new provincial government's first actions after the 1996 election was to disband the Interim Waste Authority, a provincial body set up to establish new waste disposal capacity for Great Toronto Area municipalities.
- The provincial government subsequently approved use of an abandoned iron ore mine in Kirkland Lake (the Adams Mine) as a waste disposal site, although the scope of the environmental assessment for the project was severely limited, and significant concerns regarding the technical feasibility of the project and its environmental impacts were raised though the approvals process.
- The City of Toronto subsequently rejected a contract with the site operator, as the contract would have required to the city to assume responsibility for future environmental damage associated with the site.
- The City of Toronto's Keele Valley Landfill reached capacity and was closed in December 2002. Proposals by the city to temporarily extend the life of the facility were rejected by the province.
- The City of Toronto has entered into a three year contract with a landfill in Michigan State for disposal of up to 500,000 tonnes of waste per year. The arrangement has been subject to criticism by communities along the route from Toronto.

— *Shipments of waste have been refused at the border due to leaks of biomedical wastes, and the present of low-level radioactive wastes.*<sup>50</sup>

50. J.Folle and L.Engan, "Congress to study ending trash trips," *The Toronto Star*, July 17, 2003.

—*There have been initiatives, led by Michigan representatives within the US Congress to introduce legislation to permit state governments to refuse imports of waste.*<sup>51</sup>

- In addition, in June 2001, the city has adopted a waste diversion plan that seeks 100% diversion of household waste from disposal by 2010, although the budget for the plan's implementation has been reduced in recent years.
- The Minister of the Environment has indicated that Toronto should find an alternative to export for disposal of its waste, but offered no assistance in the matter or support for the city's diversion strategy.
- Peel, York and Durham Regions and the City of Windsor export their municipal solid waste to the same facility in Michigan.
- There have been allegations that the provincial government has facilitated the sale of lands necessary to meet the conditions of approval of the Adams Mine landfill to the operation's proponent, and has pressed the City of Toronto and other jurisdictions exporting waste to Michigan to reconsider the Adams Mine option.
- It has also been reported that the City of Toronto may purchase a landfill site near Chatham, whose owner, Canadian Waster Services, has been required by the federal Competition Tribunal to sell the facility by September 2003.

### ➤ 5.3.2.3 INCINERATION AND ENERGY FROM WASTE

- The provincial government has promoted energy from waste and incineration projects as alternatives to waste disposal since 1995, removing a ban on the establishment of new incineration and energy from waste facilities in 1996.
- Energy from waste and waste incineration projects are associated with a wide range of emissions of air pollutants. One of the province's only two operational energy from waste facilities, the SWARU facility in Hamilton, was shut down in December 2002 due to its inability to meet the Canada Wide Standards for emissions of dioxins and furans.

- Energy from waste facilities compete directly with recycling programs for high value elements of the waste stream, particularly paper products and non-chlorinated plastics. The existence of energy from waste arrangements limits the growth of recycling activities.

### 5.3.3 WHAT NEEDS TO BE DONE?

- Apply full environmental assessment requirements to proposals for new disposal capacity, including demonstration of need and examination of alternatives, including waste diversion.
- Establish a provincial waste diversion strategy including:

—*The re-affirmation and expansion provincial waste diversion targets, excluding energy from waste or incineration from the definition of diversion.*

—*Support of the implementation of pay-per-bag systems by municipalities.*

—*The enforcement of existing recycling, diversion and waste reduction planning regulations for industrial, commercial and institutional waste generators.*

—*Support municipal efforts to establish organic waste diversion programs.*

—*The establishment of diversion targets for the WDO diversion program beyond the initial 45% target for Blue Box wastes.*

—*The adoption of provincial procurement policies to support markets for recycled materials.*

—*The establishment of extended producer responsibility systems (where product manufacturers have to assume responsibility for post-consumer management of products) as is being done in Europe and other provinces, for non-packaging wastes, such as electronics and appliances, and household hazardous wastes.*

### 5.3.4 FOR MORE INFORMATION

- Joanne St. Godard, Recycling Council of Ontario  
[www.rco.on.ca](http://www.rco.on.ca)
- Gord Perks, Toronto Environmental Alliance  
[www.torontoenvironment.org](http://www.torontoenvironment.org)

51. Nuclear Total does not include Bruce A Units

## 6. ENERGY

### 6.1 INTRODUCTION

- The period since 1995 has been one of enormous change in energy policy. The debates have focused around a series of major issues:

—The government's break-up of Ontario Hydro and the fate of its successor companies, Ontario Power Generation (OPG) and Hydro One;

—The introduction and then cancellation of a competitive electricity market;

—Safety and reliability issues related to the province's nuclear power generating facilities;

—The health and environmental impacts of emissions from Ontario Power Generation's coal-fired and nuclear power plants and the future role of these plants in Ontario's electricity supply; and

—The security of Ontario's short and long-term electricity supply, and future sources of supply.

### 6.2 THE VITAL FACTS

Figure 16: Ontario's End Use of Energy Consumption by Major Type, 1999

	Amount of energy (petajoules)	Amount of energy (kWh)	Percentage of Total of Total (%)
<i>Oil</i>	1105	$3.061 \times 10^{11}$	41
<i>Natural Gas</i>	782	$2.555 \times 10^{11}$	29
<i>Electricity</i>	485	$1.343 \times 10^{11}$	7
<i>Other (wood and wood waste liquefied petroleum gas, ethane and steam)</i>	189	$6.174 \times 10^{10}$	7
<i>Coal, coke, oven gas</i>	135	$4.410 \times 10^{10}$	5

Figure 17: Ontario's Current Installed Electricity Generation Resources (IMO 2003)

Resource Type	Total MW	# of Stations	Percent of Total
<i>Nuclear</i> <sup>52</sup>	10,836	4	36
<i>Coal</i>	7,546	5	25
<i>Oil/Gas</i>	4,416	24	15
<i>Hydroelectric</i>	7,636	59	25
<i>Miscellaneous (wind, waste, etc)</i>	66	2	0.002
<b>Total</b>	<b>30,500</b>	<b>94</b>	<b>100</b>

52. Nuclear Total does include Pickering A Units

- Ontario Power Generation (OPG) provided 85% of the province's electricity supply in 1999, with a total installed generated capacity of 24,700MW.
- Map of OPG Generating Facilities from OPG Power Production Map.  
<http://www.opg.com/ops/map.asp>

Figure 18: Generation by fuel, 1999<sup>53</sup>

Resource Type	Percent of Total
<i>Nuclear</i>	44
<i>Hydraulic</i>	27
<i>Coal</i>	21
<i>Natural Gas</i>	6.5
<i>Oil</i>	1.0
<i>Other</i>	0.7

- Summer peak demand in August 2002 was 25,414MW, the highest level ever recorded in Ontario.
- IMO projects median growth in demand to 28,705 by 2013, with potential peak demand of 29,535, based on considerations of economic growth and weather conditions.<sup>54</sup>
- Under business as usual models Ontario is expected to require about 6,400MW of additional generating resources over the 2004 to 2013 period.<sup>55</sup>
  - The estimate assumes the Lakeview Generating Station will be out of service by 2005, and assumes the restart of reactors at the Pickering A. facility.*
  - IMO projection does not include any assumptions re: demand management/efficiency in its estimates of demand, and makes very modest assumptions regarding renewables.*
- Maximum import capacity for Ontario is currently 4000 MW. The IMO estimates that the maximum amount of power available for import during the peak months is 1,400MW.<sup>56</sup>

- IMO's June 2003 assessment of system reliability concluded that "reserve margins are forecast to be negative" for most of the July 2003 to December 2004 period.<sup>57</sup> IMO notes that "there are circumstances under which reliance on interconnected supply would be stretched to the limits of the transmission system."

## 6.3 THE KEY ISSUES

### *The Energy Competition Act, 1998*

- The ***Energy Competition Act***, enacted in October 1998, provided for the break-up of the provincial electricity utility into three separate companies owned by the province.
  - *Ontario Power Generation (OPG), which would hold the utility's generating assets;*
  - *Hydro One, which would hold the Ontario Hydro's transmission and distribution assets; and*
  - *Ontario Electricity Finance Corporation, which absorbed \$22 billion in stranded debt from Ontario Hydro.*<sup>58</sup>
- The ***Act*** also provided for the introduction of a competitive electricity market in Ontario, conferring new powers on the Ontario Energy Board to regulate the market, and creating an Independent Market Operator (IMO) to actually operate the technical aspects of the market.
- The ***Freedom of Information and Protection of Privacy Act*** does not apply to OPG, Hydro One and the IMO. This has significantly reduced public access to information regarding the statutes and operations of generating facilities, the transmission and distribution network and the overall electricity system. Nor are these entities subject to regular oversight by the Provincial Auditor and other legislative officers.

#### 6.3.1 ELECTRICITY MARKET COMPETITION

- Following a series of delays, competition was introduced into Ontario's electricity market in May 2002.
- The provincial government abandoned this policy six months later, in November 2002, following a

53. Selection Committee on Alternative Fuels, Table B, based on Ontario Energy Board figures.

54. IMO, Ontario Demand Forecast from January 2004 to December 2013, March 2003.

55. IMO, 18 Month Outlook: An Assessment of the Reliability of the Ontario Electricity System from July 2003 to December 2004, June 2003.

56. IMO 18-Month Reliability Forecast June 2003.

57. OEFC's current debt (as of March 31, 2002 was 29.364 billion).

58. IMO, 18-month outlook June, 2003

period of high and extremely unstable electricity prices.

- When it terminated the competitive electricity market, the provincial government adopted a fixed electricity price of 4.3 cents per kilowatt-hour, retroactive to May 1, 2002, and stated that this price would stay in place for the following six years. Rebates of \$75 to electricity consumers for the cost of electricity while the competitive market was in place were also announced, at a total cost of \$335 million.
- The cost to the province of maintaining the current 4.3 cent per kilowatt/hr rate freeze, originally projected at \$100 million per month, reached \$392 million for February 2003.
- The total cost of the freeze to April 2003 was \$1.36 billion, of which \$880 million is covered by revenues generated by Ontario Power Generation via power sales; \$480 million has been added to the debt administered by the Ontario Electricity Financial Corporation.
- Most proposed new generation facilities from non-OPG proponents are on hold, due to the unstable policy environment, fixed electricity price and continued subsidization of the refurbishment of OPG's nuclear generating facilities.

### 6.3.2 THE BREAK-UP OF ONTARIO HYDRO AND FATE OF ITS SUCCESSOR CORPORATIONS

#### ➤ 6.3.2.1 HYDRO ONE

- Premier Harris proposed to privatization of Hydro One in December 2001.
- Rationale for the sale appeared to be revenue generation (the estimated value of Hydro 1 was \$5 billion) and to enable Hydro 1 to finance expansions of the transmission and distribution system into the US to permit electricity exports, potentially from OPG's coal-fired plants, when the OPG's nuclear facilities returned to service.
- The proposed sale was cancelled in April 2002, following a ruling by the Ontario Superior Court of Justice that the **Energy Competition Act** did not provide the government with legal authority to undertake the sale.

- The government subsequently announced in June 2002 its intention to retain 51% ownership of Hydro One.
- In January 2003, the government announced that it had been unable to find an investment partner, and therefore would retain 100% public ownership.

#### ➤ 6.3.2.2 DISPOSAL OF OPG ASSETS

- Under the **Energy Competition Act**, OPG was required to reduce its share of the province's electricity market to 35% by 2010.
- Reduction of generating assets has proceeded slowly, particularly in the context of concerns regarding the reliability of OPG's nuclear generating facilities, and the future role of OPG's coal-fired generating facilities.

— *Bruce A and B generating facilities were leased to British Energy in May 2001.*

— *British Energy subsequently announced its bankruptcy, and the lease was transferred to a consortium of Cameco (a Saskatchewan based uranium mining company) 31.6%; TransCanada Pipelines 31.6%; OMERS 31.6%; Power Workers Union 4% and Society of Energy Professionals 1.2% in February 2003.*

### 6.3.3 NUCLEAR SAFETY AND RELIABILITY

- In July 1997 an external review of Ontario Hydro raised major concerns regarding the maintenance and safety of the utility's nuclear generating assets.
- The Nuclear Asset Optimization Plan (NAOP) was announced as a result, through which seven generating units (Bruce A and Pickering A) were taken out of service for repair and overhaul. Investments of \$8 billion on the refurbishment of OPG's nuclear facilities were announced.
- In the meantime, the utility announced its intention to rely on its coal-fired generating facilities: Lakeview (Mississauga); Nanticoke; Lambton; Thunder Bay and Atikokan to replace the lost power supplies estimated at 4,000 MW.

— *This has led to major increases in emissions of smog and acid rain precursors, and heavy metals from these facilities (See below)*



- There are major questions regarding the future of OPG's remaining nuclear assets.

***Efforts to refurbish Pickering A are well behind schedule and costs have risen to \$2.5 billion, nearly double the original estimated cost of \$1.3 billion***

—IMO suggested as of April 2003, Unit 4 return to service June 2003, the 3 other units are projected to return to service at one year intervals.<sup>59</sup>

—At the end of May it was announced that Unit 4 would not return to service until July 2003. As of June 2003, the remaining Pickering units are not projected to return to service until after December 2004.<sup>60</sup>

—It was subsequently announced that Picking Unit 4 would not return to service until September 2003.<sup>61</sup>

- A review of the refurbishing of the Pickering facility was announced by the Ministry of Energy on May 20, led by former federal Minister of Energy, Mines and Resources Jake Epp, a well known advocate of nuclear power.<sup>62</sup> The review is to report by December 2003.

- The IMO suggested in April 2003 that Bruce A units 3 and 4 would return to service by June 2003, but that Unit 3 would retire within 10 years.

— It was then announced in June 2003 that Unit 4 will not return to service until July 2003, and Unit 3, August 2003<sup>63</sup> and that the costs of the project were 36% over estimates.<sup>64</sup>

— It was subsequently announced that Unit 4 would return to service in September, and Unit 3 in October 2003.<sup>65</sup>

— Concerns have been raised regarding the safety of Bruce Power's decision not to fully replace the fuel channels in Units 3 and 4. This was done with the Pickering A reactors following an August 1983 accident.<sup>66</sup>

- The IMO also noted at the end of June 2003 that "no laid-up nuclear unit has been returned to service in Ontario."<sup>67</sup>

- There is evidence that the life-span of OPGs reactors is turning out to be much shorter than originally projected (20 years rather than 30-40 years).<sup>68</sup>

- There has been no long-term resolution to disposal of spent fuel, which is highly radioactive, and which is currently stored on-site at OPG's nuclear generating facilities.

#### 6.3.4 OPGS COAL-FIRED GENERATING PLANTS

- The July 1997 NAOP relied heavily on OPG's coal-fired generating facilities (Lakeview, Nanticoke, Lambton, Thunder Bay and Atikokan) to replace the laid-up nuclear generating facilities.

- This resulted in major increases in emissions of smog precursors (NO<sub>x</sub>, SO<sub>x</sub>, particulates), GHGs, and heavy metals (mercury, lead, cadmium) for these facilities.

***Between 1995 and 2001:***<sup>69</sup>

— Emissions of GHGs increased by a factor of 2.3

— Emissions of SO<sub>2</sub> doubled

— Emissions of NO<sub>x</sub> increased by a factor of 1.7.

- In 2001 OPG's coal-fired plants accounted for:<sup>70</sup>
  - 27% of Ontario's SO<sub>2</sub> emissions
  - 20% of Ontario's GHG emissions (Note NRCan estimate is 14%)
  - 14% of Ontario's NO<sub>x</sub> emissions
  - 67% of Ontario's chromium emissions
  - 34% of Ontario's airborne mercury emissions

- Nanticoke alone accounted for half of the 7% increase in total air emissions from Canadian industrial facilities reported through the NPRI between 1998 and 2000.

59. IMO, Interim Update to the 18-Month Outlook Issued June 24, 2003, July 28, 2003.

60. See, D.Martin, "Nuclear Power in Canada - An Overview" (Ottawa: Sierra Club of Canada, June 2003).

61. IMO, 18-month outlook June, 2003

62. J.Spears, "Delays in restarting Bruce A increase cost by \$160 million," The Toronto Star, July 26, 2003.

63. IMO, Interim Update to the 18-month Outlook Issued June 24, 2003, July 28, 2003.

64. See, D.Martin, "Nuclear Power in Canada - An Overview" (Ottawa: Sierra Club of Canada, June 2003).

65. IMO, 18-month outlook June, 2003

66. IMO, 18-month outlook June, 2003, pg.26.

67. See R.D. Torrie and R.Parfett, Phasing Out Nuclear Power in Canada: Towards Sustainable Energy Futures (Ottawa: Campaign for Nuclear Phaseout and Torrie Smith Associates, July 2003), pg.3-5.

68. OCAA, Countdown Coal, February 2003.

69. OCAA, Countdown Coal, February 2003.

70. IMO, 10-Year Outlook, March 2003.

- Emissions from the Lambton, Nanticoke and Lakeview facilities have significantly exacerbated the smog situation in southern Ontario.
- See **Section 2.2.1** on developments regarding the control of emissions and future role of these facilities.

### 6.3.5 DEMAND MANAGEMENT AND SECURITY OF SUPPLY

#### ➤ 6.3.5.1 THE ROLE OF DEMAND MANAGEMENT IN IMO'S DEMAND PROJECTS

- The IMO's projections of power shortages do not take into account potential for energy efficiency measures to reduce demand or assume significant contributions from new renewable sources of supply.

#### ➤ 6.3.5.2 NEW SOURCES OF ELECTRICITY SUPPLY

- Most proposed new generation facilities from non-OPG proponents are on hold,<sup>71</sup> due to the unstable policy environment, fixed electricity price and continued subsidization of the refurbishment of OPG's nuclear generating facilities.

— *One plant, Trans-Alta co-generation plant in Sarnia was scheduled to come on line in the summer of 2003*

— *Only two other projects are considered by the IMO "under construction"*

*Atco Brighton Beach (578 MW)*

*Imperial Oil (98 MW)*

#### ➤ 6.3.5.3 THE ROLES OF ENERGY EFFICIENCY AND LOW IMPACT RENEWABLE ENERGY SOURCES

- Programs related to energy efficiency measures and renewable sources of supply, such as wind and small-scale hydro, were dropped from the province's approach to electricity demand and supply after the 1995 election and were completely absent from the competitive electricity market framework adopted in May 2002.
- The introduction of competition theoretically offered opportunities for the addition of low-impact renewable energy supplies, such as wind, to Ontario's electricity grid.

- Analyses by the North American Commission for Environmental Cooperation and others have concluded that in the absence of specific measures to promote energy efficiency and low-impact renewable energy sources, such an approach was likely to lead to increased reliance on energy sources associated with high emissions of smog precursors and GHGs, particularly coal.<sup>72</sup>

- Some modest initiatives related to renewables and efficiency were included in the province's November 2002 announcements of the termination of the competitive electricity market and fixing of electricity prices.<sup>73</sup> These included:

— *A commitment that the government reduce its electricity consumption by 10% and source 20% of its own energy needs from renewable sources.*

— *The provision of tax incentives for the purchase of energy efficiency equipment by industry and sales tax rebates for consumers for the purchase of high efficiency appliances; and*

— *A 10 year corporate income tax holiday for new suppliers of electricity from clean, alternative or renewable sources.*

- These initiatives have not had a significant impact on energy efficiency or renewable energy projects in Ontario.

#### ***The report of the Select Committee on Alternative Fuel Sources***

- Government accepted the June 2002 report of the Legislature's Select Committee on Alternative Fuel Sources, which outlined a comprehensive strategy for energy efficiency and the promotion of low-impact renewable energy sources. However, it has adopted few specific measures beyond those announced in November 2002 to implement the committee's report.

- The committee's report highlighted the degree to which Ontario is falling behind other jurisdictions in the United States and Europe in the adoption of policies to support renewable energy sources.

71. See, for example, North American Commission for Environmental Cooperation, *Environmental Challenges and Opportunities of the Evolving North American Electricity Market: Secretariat Report to Council Under Article 13 of the North American Agreement on Environmental Cooperation* (Montreal: CEC, June 2002).

72. See Government of Ontario Press Release, "Eves Government Takes Action to Promote Green Energy, Alternative Fuels and Conservation" (November 13, 2002).

73. J. Spears, "Third of emergency electricity supply deals fall apart," *Toronto Star* July 22, 2003.

Figure 19: Renewables Policy Comparison for Select Jurisdictions

	European Union	Germany	United Kingdom	Denmark	Italy	Iceland	Australia	Brazil	United States	Michigan	Massachusetts	New York	California	Texas	Canada	British Columbia	Alberta	Ontario	COMMITTEE RECOMMENDATIONS
1 <b>Renewable Portfolio Standard</b>	X <sup>a</sup>		X	X	X	X	X				X			X		X <sup>b</sup>			X
2 <b>Net Metering</b>		X		X							X	X	X	X				X <sup>c</sup>	X
3 <b>Emissions Trading</b>			X	X	X		X		X	X	X	X	X	X		X		X	X
4 <b>Energy Conservation &amp; Efficiency Measures</b>	X		X			X	X						X	X	X	X		X	X
5 <b>Consumer Awareness &amp; Education</b>	X	X	X	X			X		X	X	X		X	X		X			X
6 <b>Renewables: Production Incentives</b>		X	X	X	X			X		X	X	X		X	X		X		X
7 <b>Renewables: Manufacturing Incentives</b>		X					X		X				X		X	X			X
8 <b>Renewables: Purchasing Incentives</b>		X		X	X		X	X	X			X	X		X	X		X	X
9 <b>Research &amp; Development</b>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X
10 <b>Coordinating Agency</b>		X	X	X	X		X			X					X		X		X
11 <b>Systems Benefit Charge</b>			X	X	X						X	X	X	X					X
12 <b>Power Labeling Requirement</b>		X	X	X	X	X	X				X	X	X	X		X		X	X

<sup>a</sup>The European Union has a proposed Renewable Fuel Standard that would establish a minimum level of biofuels as a proportion of fuels sold from 2005, starting with 2% and reaching 5.75% in 2010.

<sup>b</sup>Renewable Portfolio Standard is for B.C. Hydro.

<sup>c</sup>Net metering is offered by Toronto Hydro

### The renewable portfolio standard announcement

- In July 2003, the government announced that it would introduce a requirement that the amount of electricity provided in Ontario from renewable sources (defined as hydro, wind and biomass) would, starting in 2006, increase by 1% per year over eight years, to total 3,000MW by 2014.
- No legislation or regulations to actually implement the renewable energy standard have been announced or implemented by the government. In its announcement the government stated that legislation establishing the standard would be introduced in the fall of 2003.

### ➤ 6.3.5.4 EMERGENCY POWER SUPPLIES

- In April 2003, the government issued a call for between 200 and 400 megawatts of short-term generating capacity to be operational by the summer and fall.
- In June 2003 it was announced that 409 megawatts of supply had been contracted from natural gas powered suppliers, at an initial cost of \$100 million. Power provided by these facilities will be provided at the market rate if needed. It is estimated that the government is paying \$14 million per month to keep the facilities on 10-minute stand-by to produce power at peak periods.

- It was subsequently announced that negotiations with four of the seven suppliers failed, with the result that only 267 megawatts will actually be available, at a cost of \$70 million.<sup>74</sup>

## 6.4 WHAT NEEDS TO BE DONE?

- Phase out of OPG's coal-fired generating facilities by 2007/2010.
- The establishment of incentives for individual and net metering<sup>75</sup> of electricity.
- The establishment of renewable portfolio standards for electricity suppliers and local utilities, requiring that a portion of the electricity they provide comes from low-impact renewable sources, such as wind, solar and small-scale hydro.
- adopt new energy efficiency standards for home appliances, offices equipment and other devices that use electricity under the *Energy Efficiency Act*.
- The strengthening of the provisions of the provincial building code regarding energy efficiency.
- The provision of financial incentives for energy efficiency retrofits to homes and businesses, and community-based energy efficiency incentives.
- The provision of incentives and support for rooftop gardens on residential, commercial, institutional and industrial buildings.<sup>76</sup>
- The provision of incentives for the development of district energy systems.<sup>77</sup>
- The provision of incentives to energy suppliers and distributors to promote more efficient uses of their products, such as the Shared Savings Mechanisms applied to natural gas suppliers for their energy efficiency, demand side management initiatives.
- The termination of provincial financial assurances for refurbishment of nuclear generating facilities.

- The conduct of an independent external review of Ontario electricity demand and supply, including examination of potential contribution of energy efficiency measures and renewable energy sources, as well as consideration of the security and environmental and health implications of different supply and demand management options.
- Provide for public access to records held by OPG, Hydro One and the IMO under the *Freedom of Information and Protection of Privacy Act*.

## 6.5 FOR MORE INFORMATION

- Jack Gibbons, Ontario Clean Air Alliance  
[www.cleanair.web.net](http://www.cleanair.web.net)
- Dave Martin, Sierra Club of Canada  
[www.sierraclub.ca](http://www.sierraclub.ca)
- Keith Stewart, Toronto Environmental Alliance  
[www.torontoenvironment.org](http://www.torontoenvironment.org)
- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

74. "Net" metering allows users who generate their own electricity through wind or solar systems to sell energy surplus to their own needs back to the electricity grid.

75. See, for example, P. Gorrie, "Greenery," *The Toronto Star*, December 21, 2002.

76. Metropole Consultants, *Urban Sustainability and Ecological Fiscal Reform: An Exploration of 'High Priority' Measures*, prepared for NRTEE (September 2002), pp.5-6.

77. [www.mnr.gov.on.ca/MNR/forests/t&l\\_overview/overview.htm](http://www.mnr.gov.on.ca/MNR/forests/t&l_overview/overview.htm) (October 12, 2001)

## 7. FORESTS AND PROTECTED AREAS

### 7.1 INTRODUCTION

There have been two defining events related to the management of Ontario's Crown forests and the development of its system of protected areas since 1995:

- The enormous cuts that occurred to the MNR's budget following the 1995 election; and
- The 1999 Lands for Life/Living Legacy Accord, which committed the government to a major expansion of the province's park and protected areas system, but also entailed commitments to the forest industry re: security of wood supply and expansion of forest operations into the Boreal region north of the 51st Parallel.

### 7.2 FOREST MANAGEMENT

#### 7.2.1 THE VITAL FACTS

- 65% per cent (69.1 million hectares) of Ontario is forested, and approximately 91% of these forest lands are owned by the province.<sup>78</sup>
- Ontario's forests are home to a multitude of plants and animals, including a variety of mammals, birds, fish, amphibians and reptiles. Most of the province's 3,200 species of plants, 160 species of fish, 80 species of amphibians and reptiles, 400 species of birds and 85 species of mammals are forest dependent.<sup>79</sup>
- The forest sector is a major contributor to the province's economy. In 1996, the most recent year for which data is available, the Ontario forest products industry shipped approximately \$12.2-billion worth of forest products, with wood products (e.g., lumber) accounting for \$3.4-billion, while paper and allied industries contributed \$8.8-billion.<sup>80</sup>

- Approximately 25 million hectares of Ontario's Crown forests are under license for harvesting. This area is divided into 68 management units.
- The province has been pursuing a long-term strategy of converting all of Ontario's forest management units to long-term Sustainable Forest Licenses (SFLs). These licenses are automatically renewed if license holders meet their terms and conditions.
- As of April 2003, only three of the province's 68 forest management units remained under Crown management (Cochrane, Moose River and Temagami).
- The total area of forests harvested in Ontario has fallen from 238,213 ha in 1990 to 185,724 ha in 2001.<sup>81</sup>
- The total area clearcut fell from 207,585ha in 1990 to 172,455 in 2001.<sup>82</sup>

#### 7.2.3 THE KEY ISSUES

##### ➤ 7.2.3.1 MNR'S ROLE IN FOREST MANAGEMENT

- In the fall of 1995 and spring of 1996 major reductions to the MNR's operating budget, which fell from \$497 million in \$312 million in 1999/00
- This resulted in a 50% reduction in the MNR's field staff related to forestry between 1995 and 2003. Compliance staff were reduced by 66% from 138 to 45, leaving one inspector per 550,000 hectares of forest under license.
- A wide range of functions related to forest management were transferred from the MNR to forest license holders, including the conduct of compliance inspections on forest operations.
- As of May 2003, the MNR was responsible for the conduct of primary compliance inspections in only one of the province's 68 forest management units, Temagami.
- Reviews of the self-inspection system have concluded MNR inspectors identify instances of non-compliance by forest companies at a much higher rate than their industry counterparts, and have questioned whether the MNR has the capacity to effectively oversee the system.

81. [http://nfdp.ccfm.org/Detailed/reports/provinces/ontario/P610\\_06.PDF](http://nfdp.ccfm.org/Detailed/reports/provinces/ontario/P610_06.PDF)

82. Environmental Assessment Board, Reasons for Decision and Decision: Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario, EA-87-02, April 20, 1994, Terms and Conditions 21-77.

- More generally, concerns have been raised about the MNR's almost total reliance on license holders for information on the condition and management of Ontario's Crown forests, and for forest management functions.
- The full allocation of available Crown forests through the SFL system also limits the MNR's ability to adopt alternative forms of forest tenure and management approaches, that may be more appropriate for community groups or first nations.

#### ➤ 7.2.3.2 TIMBER MANAGEMENT EA RENEWAL

- The Class Environmental Assessment of Timber Management on Crown Lands in Ontario, completed by the Environmental Assessment Board in 1994 constituted the most extensive public review of forest management practices in the province's history.
- In its decision, the Board imposed 115 terms and conditions in its decision. These terms and conditions addressed such issues as the development and approval of Timber Management Plans,<sup>83</sup> public participation in the forest management planning process,<sup>84</sup> the size of clear-cuts,<sup>85</sup> the protection of non-timber values<sup>86</sup> and annual and five year reports on timber management and the state of the province's forests.
- Together with the provisions of the 1994 *Crown Forest Sustainability Act*, the Terms and Conditions of the Timber Management EA set the rules for forest management in Ontario.
- The approval under the Timber Management EA is scheduled to expire in May 2003.
- The MNR has proposed that the environmental assessment approval be modified to remove most of the specific requirements contained in the Environmental Assessment Board's 1994 decision and replace them with requirements to be determined by the Ministry in the future. The MNR has also proposed that the renewal of the environmental assessment be "evergreen," removing the possibility of a further comprehensive review in the future.

- The MOE agreed to these proposals, despite receiving over 500 submissions opposing the MNR's proposals, on July 4, 2003.

#### ➤ 7.2.3.3 COMPLIANCE WITH EXISTING TIMBER MANAGEMENT EA TERMS AND CONDITIONS CLEAR CUTS

- Term and condition 27 of the Timber Management EA limited the size of clearcuts in Ontario to not more than 260 hectares.
- A study by the Sierra Legal Defense Fund and Earthroots completed in November 2002 found that the MNR routinely approved clearcuts over 260 hectares.<sup>87</sup>
- Between 1998 and 2000, the MNR approved ten forest management plans with over 70% of the area harvested in clearcuts over the 260-hectare limit. In one case a 10,257-hectare cut was approved.

#### ➤ 7.2.3.4 OPENING THE NORTHERN BOREAL FOREST TO TIMBER HARVESTING

- The province has indicated its intention to open the area north of the 51st parallel to logging operations. The area, consisting of the province's northern boreal forest region, is currently unallocated and largely roadless.
- There are major concerns regarding the sustainability of forestry operations in this region given the slow pace at which the forest regenerates.
- The proposals also raise significant concerns related to aboriginal land claims.
- The terms and conditions of the Timber Management Environmental Assessment do not apply to this region.

### 7.2.3 WHAT NEEDS TO BE DONE?

- Invest revenues generated from harvesting Ontario's Crown forests, which now exceed forest management expenditures by a wide margin, in

83. Environmental Assessment Board, Reasons for Decision and Decision: Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario, EA-87-02, April 20, 1994, Terms and Conditions 4-14.

84. Environmental Assessment Board, Reasons for Decision and Decision: Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario, EA-87-02, April 20, 1994, Term and Condition 23.

85. Environmental Assessment Board, Reasons for Decision and Decision: Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario, EA-87-02, April 20, 1994, Term and Condition 27.

86. SLDF, Clearing the forest, Cutting the rules, November 2002.

87. Ontario's Living Legacy Report Card for Parks and Protected Areas (Toronto: Federation of Ontario Naturalists, June 2003).

strengthening MNR's ability to oversee forest management operations.

- Revise the Declaration Order approving the Timber Management EA so that it is only approved for a fixed term, not exceeding five years, and provide for an independent, external review of MNR's compliance with the terms and conditions of the approval prior to renewal.
- Timber operations should not be authorized in Ontario's northern boreal forest, pending an independent review of the sustainability and likely environmental and social impacts of such development.

#### 7.2.4 FOR MORE INFORMATION

- Earthroots  
[www.earthroots.org](http://www.earthroots.org)
- FON  
[www.ontarionature.org](http://www.ontarionature.org)
- Sierra Legal Defense Fund  
[www.sierralegal.org](http://www.sierralegal.org)
- Wildlands League  
[www.wildlandsleague.org](http://www.wildlandsleague.org)

## 7.3 PARKS AND PROTECTED AREAS

### 7.3.1 THE VITAL FACTS

- Total area of provincial parks and protected areas prior to 1999: 8.1 million hectares.

### 7.3.2 THE KEY ISSUES

#### ➤ 7.3.2.1 LANDS FOR LIFE/ONTARIO LIVING LEGACY

• In March 1999, the Ontario government announced a major expansion of the province's parks and protected areas network, following a two-year consultation process entitled "Lands for Life." The exercise was focused on the future uses of 46 million hectares of public lands in central Ontario.

- The announcement included 378 new parks and conservation reserves, adding 2.4 million hectares to Ontario's protected areas system under a program entitled "Ontario's Living Legacy (OLL)."
- Proposals were controversial, as they were accompanied by commitments of no long-term reduction in wood supply to the forest industry or increases in the costs of wood supply, greater allowance of "intensive" forestry practices, and the potential extension of forest harvesting activities north the 51st parallel.
- There have been ongoing controversies regarding the status of mineral leases and mineral exploration in the areas designated as new parks and conservation reserves. 100 of the 378 OLL sites included probable overlaps with mineral tenure. The Mellon Lake Reserve as been a focal point of these debates.
- As of May 1, 2003, 33 parks and 132 conservation reserves had been established, covering 454,374 hectares. This accounts for 43% of the sites identified through the Lands for Life process, but only 19% of the total land area. 60% of the land area is designated as conservation reserves under the *Public Lands Act*, rather than as provincial parks under the *Provincial Parks Act*. Unlike parks, management plans are not required for these areas, and no additional resources or staff have been provided for their management.<sup>88</sup>
- Controversies have arisen regarding other uses of conservation reserves, such as hunting, commercial fur harvesting and the use of motorized vehicles. The government proposed to designate the Kawartha Highlands Conservation Reserve as a 'Recreation' Reserve, where such uses would be permitted, through *Bill 239 Recreation Reserve Act*, introduced in December 2002. The Bill was not enacted and was subsequently replaced with the *Kawartha Highlands Signature Site Park Act*, enacted on June 26, 2003, stating that the "overriding" priority for the administration and management of the park is the protection of its ecological integrity, and placing controls on the use of motor vehicles in the park.
- A number of additional parks and conservation reserves were designated in May and June 2003. As of July 1, 2003, a total of 69 provincial parks and 205 conservation reserves had been established, totaling 1,438,627 hectares. This accounts for 73% of the

88. See [http://www.ontarionature.org/enviroandcons/protected\\_areas/ollupdate.html](http://www.ontarionature.org/enviroandcons/protected_areas/ollupdate.html)

sites identified through the Lands for Life process 60% of the total land area. 56% if the land area is designated as conservation reserves rather than provincial parks.<sup>89</sup>

### 7.3.3 WHAT NEEDS TO BE DONE?

- Complete the Lands for Life/Living Legacy parks and protected area system, excluding mineral exploration, mining, logging, hydroelectric development and other inappropriate uses, such as the recreational use of motorized vehicles (e.g. snowmobiles and ATVs).
- Transfer the management of conservation reserves into the jurisdiction of Ontario Parks<sup>90</sup> and the **Provincial Parks Act**, and provide adequate resources for their management and protection.

### 7.3.4 FOR MORE INFORMATION

- Earthroots  
[www.earthroots.com](http://www.earthroots.com)
- FON  
[www.ontarionature.com](http://www.ontarionature.com)
- Wildlands League  
[www.wildlandsleague.com](http://www.wildlandsleague.com)

## 7.4 BIODIVERSITY AND SPECIES AT RISK

To see the changes in bird species populations from 1996-1999 in Boreal ecozone and mixedwood plains ecozone from breeding bird surveys, refer to the **Ministry of Natural Resources 2001 State of the Forest Report, table 2.2.6.b**

- Ontario list of Species at Risk is available at [http://www.mnr.gov.on.ca/mnr/VTEEE\\_June\\_4\\_2003.pdf](http://www.mnr.gov.on.ca/mnr/VTEEE_June_4_2003.pdf). Includes **Ontario Endangered Species Act** status and COSEWIC Status.

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89. The Agency created in 1996 to manage Provincial Parks.

90. From Management Board Secretariat, Annual Estimates 1991/92-2002/03 (Toronto: MBS).



# 8. GOVERNANCE AND ACCOUNTABILITY

## 8.1 ENVIRONMENTAL BUDGETS AND PERSONNEL

• The period following the 1995 election witnessed enormous losses in operating budgets and personnel for the key provincial agencies charged with the protection of the environment and management of natural resources.

### 8.1.1 MINISTRY OF THE ENVIRONMENT

#### ➤ 8.1.1.1 OPERATING BUDGET

• The reductions in the MOE’s operating expenditures between 1994/95 and 2003/04 are shown below in Figure 19.

**Figure 20: Operating Expenditures, 1994/1995 – 2003/2004**

Fiscal Year	\$Current millions
1994-1995	258
1995-1996	226
1996-1997	146
1997-1998	142
1998-1999	162
1999-2000	174
2000-2001	190
2001-2002	265
2002-2003 (interim)	250
2003-2004 (Plan)	266

- There have been incremental increases in the MOE’s operating budget since the low of \$142 million in 1997/98, with a particularly large increase following the May 2000 Walkerton disaster.
- The reductions in the Ministry of the Environment’s capacity resulting from these cuts were identified as a significant contributing factor in the Walkerton Disaster by the Walkerton Inquiry.
- The Ministry’s budget has only recently recovered to pre-Walkerton levels, in current dollars, but remains 17% less than 1994/95 when inflation is taken into account.

**Figure 21: Amount, CPI**

YEAR	CURRENT	1992 = 100	CORRECTOR AMOUNT	1992\$
1994-95	258	102	1.02	252.9412
1995-96	226	104.2	1.042	216.8906
1996-97	146	105.9	1.059	137.8659
1997-98	142	107.6	1.076	131.9703
1998-99	162	108.6	1.086	149.1713
1999-00	174	110.5	1.105	157.4661
2000-01	190	113.5	1.135	167.4009
2001-02	256	116.4	1.164	219.9313
2002-03	250	119	1.19	210.084
2003-04	266			

#### ➤ 8.1.1.2 MINISTRY OF THE ENVIRONMENT STAFFING LEVELS

• The cuts to the Ministry’s budget translated into major reductions in its staffing levels.

**Figure 22: Staffing Levels**

Date	Total Staff
March 31, 1995	2,208
January 1, 1999	1,277
2002-2003 Business Plan	1,710

1. Ontario Medical Association, The Illness Costs of Air Pollution in Ontario: A Summary of Findings (Toronto: Ontario Medical Association, June 2000), updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003.  
 2. Ontario Medical Association, The Illness Costs of Air Pollution in Ontario: A Summary of Findings, updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003  
 3. Ontario Clean Air Alliance Countdown Coal, February 2003, pg.2.  
 4. An amendment to the 1991 Canada-US Air Quality Treaty, The Ozone Annex dealing with smog sources and was signed by Canada and the United States in October 2000.

- By the beginning of 1999 the Ministry's staff was down 42% against 1995 levels.
- Staffing levels have increased since the Walkerton disaster, but the ministry's current staff is still 22.5% less than it was in 1995.

## 8.1.2 MINISTRY OF NATURAL RESOURCES

### ➤ 8.1.2.1 MNR OPERATING BUDGET

The Ministry of Natural Resource's operating budget was also subject to major budget reductions.

**Figure 23: MNR Operating Budget, 1991/1992 – 2002/2003<sup>91</sup>**

Year	Total Operating Budget (Current \$ Millions)
1994-1995	258
1995-1996	226
1991/92	568.6
1992/93	458.3
1993/94	528.8
1994/95	497.6
1995/96	486.9
1996/97	317.4
1997/98	331.6
1998/99	329.6
1999/00	312.5
2000/01	314.5
2001/01	340.8
2002/03	333.5

The impact of the cuts has been moderated somewhat by in-year allocations.

**Figure 24: MNR Expenditures, 1991/1992 – 2002/2003**

Year	Total Operating Budget (Current \$ Millions)
1994-1995	258
1995-1996	226
1991/92	568.6
1992/93	458.3
1993/94	528.8
1994/95	478
1995/96	519
1996/97	417
1997/98	405
1998/99	542
1999/00	460
2000/01	417
2001/02	438
2002/03 (Interim)	464
2003/04 (Plan)	450

### ➤ 8.1.2.2 MNR STAFFING LEVELS

- The Budgetary changes at the MNR resulted in major losses of personnel.

**Figure 25: MNR Total Staff, 1995 - 2002**

Date	Personnel
March 31, 1995 <sup>92</sup>	6,639
March 31, 1998 <sup>93</sup>	4,643
Fiscal 2002/03	3,450

91. M. Winfield and G. Jenish, Ontario's Environment and the 'Common Sense Revolution: A Third Year Report (Toronto: CIELAP, June 1998), Table vi.

92. Winfield and Jenish, Ontario's Environment and the 'Common Sense Revolution: A Third Year Report, Table vi.

93. SLDF, Polluter's Haven, July 2002.

- The Ministry's current staffing levels are down 48% against 1995 levels.
- A major consequence of these reductions has been that almost all industries regulated by the MNR have been placed on self-inspection/regulation systems. The sectors now covered by such systems include:

- *Forestry*
- *Aggregates (pits and quarries)*
- *Petroleum (oil and gas wells)*
- *Commercial Fisheries*
- *Baitfish*
- *Fur*

### 8.1.3 SUBSIDIES TO INDUSTRY

- At the same time that the government undertook these reductions in the budgets of its environment and natural resource industries, it provided major increases in subsidies to certain resource sectors.
- Provincial government support to the mining industry, for example, rose by 58% between 1994/95 and 2000/01, from \$42.7 million to \$67.4 million.

### 8.1.4 WHAT NEEDS TO BE DONE?

- Commitment of financial resources to Ministry of the Environment and Conservation Authorities necessary to fully implement the recommendations of Parts I and II of the Walkerton Inquiry, while restoring monitoring, research, policy and enforcement capacity in other areas of the ministry's operations to at least their 1994/95 levels.
- The establishment of an independent task force to review provincial subsidies, grants, tax incentives and other fiscal programs to identify barriers and disincentives to energy, water, and materials efficiency and other environmentally sustainable practices.

### 8.1.5 FOR MORE INFORMATION

- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

## 8.2 ADMINISTRATIVE TRIBUNALS AND THE APPOINTMENT PROCESS

### 8.2.1 BACKGROUND

- Administrative Tribunals play a critical role in the protection of Ontario's environment and land-use planning.
- Tribunals hear appeals by proponents and members of the public regarding proposals for waste disposal sites, water takings, and land-use planning decisions.
- The key environmental tribunals include:

#### *The Environmental Review Tribunal*

— Created through a merger of the Environmental Appeal Board and the Environmental Assessment Board

— Hears appeals of Ministry of the Environment decisions related to water takings, waste disposal sites and other proposals under the *Ontario Water Resources Act* and *Environmental Protection Act*.

— The tribunal also undertakes public hearings under the *Environmental Assessment Act*.

#### *The Niagara Escarpment Commission*

— Responsible for land-use decisions under the *Niagara Escarpment Planning and Development Act*.

— Commission decisions may be appealed to hearing officers.

#### *Ontario Municipal Board*

— Hears appeals of municipal decisions, including appeals of municipal land-use planning decisions under the *Planning Act* by developers and members of the public.

### 8.2.2 THE KEY ISSUES

- There has been growing concern over the role of these bodies since 1995. Specific concerns have included:

1. Ontario Medical Association, *The Illness Costs of Air Pollution in Ontario: A Summary of Findings* (Toronto: Ontario Medical Association, June 2000), updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003.

2. Ontario Medical Association, *The Illness Costs of Air Pollution in Ontario: A Summary of Findings*, updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003.

3. Ontario Clean Air Alliance Countdown Coal, February 2003, pg.2.

4. An amendment to the 1991 Canada-US Air Quality Treaty, The Ozone Annex dealing with smog sources and was signed by Canada and the United States in October 2000.

— *The lack of qualifications and pro-development orientation of many appointees.*

— *The difficulties faced by community and public interest interveners in challenging development proposals following the expiry of the **Intervener Funding Project Act** in 1996. This is a significant problem given the complex legal and technical issues often before these tribunals.*

— *The ease with which developers can challenge municipal planning decisions before the OMB, following the 1996 amendments to the **Planning Act**.*

### 8.2.3 WHAT NEEDS TO BE DONE?

- The reform to the appointment process to ensure qualified and unbiased appointees. This should be modeled on the system for provincial court appointments, where appointments are made from lists of qualified nominees developed by an independent and non-partisan advisory committee. Appointments should be for fixed terms with removal only for demonstrated cause.
- The establishment of a mechanism to provide funding resources for community and public interest interveners in the hearing process.
- Reform the Ontario Municipal Board process, to make it fairer and more accessible to community groups and individuals.

### 8.2.4 FOR MORE INFORMATION

- Linda Pim, Federation of Ontario Naturalists  
[www.ontarionature.org](http://www.ontarionature.org)
- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

## 8.2 THE RED TAPE COMMISSION AND THE REGULATORY PROCESS

### 8.3.1 BACKGROUND

- A Red Tape Commission, consisting of Progressive Conservative MPP's was created in December 1995 with a mandate to oversee and drive the province's regulatory reform process.
- The Commission has been a consistent source of pressure on the MOE to weaken regulatory requirements related to environmental protection, and has attempted to interfere in the conduct of prosecutions by the Ministry.
- All regulatory proposals are subject to review by the Commission.

***A Regulatory Impact and Competitiveness Test, developed by the RTC has been applied to all regulatory proposals, including those related to health, safety and the environment by Order in Council June 1999. The test requires that:***

- All proposed regulations be neutral or enhance competitiveness.
- All regulatory proposals pass a strict cost/benefit test.
- The establishment of a permanent Red Tape Commission was announced in May 2000.
- The Walkerton Inquiry concluded that the anti-regulatory policies of which the Red Tape Commission was the central expression was a significant factor in the failure of the Ontario government to take regulatory actions that would have reduced the scope of the Walkerton disaster.

### 8.3.2 WHAT NEEDS TO BE DONE?

- Disbandment of the Red Tape Commission.
- Replacement of the Regulatory Impact and Competitiveness Test with a new evaluative policy for proposed regulations, major programs and policies, that emphasizes net gains to the social, economic and environmental sustainability of Ontario.

1. Ontario Medical Association, *The Illness Costs of Air Pollution in Ontario: A Summary of Findings* (Toronto: Ontario Medical Association, June 2000), updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003.

2. Ontario Medical Association, *The Illness Costs of Air Pollution in Ontario: A Summary of Findings*, updated via personal communication, John Wellner, Director, Environment Programs, OMA, January 15, 2003.

3. Ontario Clean Air Alliance Countdown Coal, February 2003, pg.2.

4. An amendment to the 1991 Canada-US Air Quality Treaty, The Ozone Annex dealing with smog sources and was signed by Canada and the United States in October 2000.

- Extension of the *Environmental Bill of Rights* model of providing opportunities for public comment before the finalization of proposed laws, regulations and policies, to all areas affecting public health and safety.

### 8.3.3 FOR MORE INFORMATION

- Mark Winfield, Pembina Institute  
[www.pembina.org](http://www.pembina.org)

## 8.4 ENVIRONMENTAL LAW ENFORCEMENT

### 8.4.1 SITUATION OVERVIEW

- Cuts to MOE budget accompanied by a dramatic decline in the Ministry's law enforcement efforts.
- Total fines declined from \$3.065 million in 1995 to \$865,840 in 1998.

— *Have recovered somewhat since then, following the establishment of a SWAT investigations team after the Walkerton Inquiry.*

***The Ministry's approach to environmental law enforcement remains weak. Analysis of Ministry enforcement data by the Sierra Legal Defense Fund<sup>94</sup> found the following:***

- 2500 violations of air pollution laws by 170 facilities between 1994-2000.
- only 7 prosecutions and convictions since 1998.
- 4000 Waste water violations by 95 facilities between 1992 and 2000.
- 1,946 violations of provincial wastewater laws were reported in 2001, the most recent year for which data is available.
- The province initiated prosecutions against only 9 of the 216 facilities in violation.

### 8.4.2 WHAT NEEDS TO BE DONE

- Strengthening core operating budget of the MOE.
- The provision of annual reports on offences against the environment, as provided in the early 1990s.
- The adoption of a mandatory rather than voluntary approach by the MOE to ensuring compliance with environmental laws by regulated entities.

### 8.4.3 FOR MORE INFORMATION

- Sierra Legal Defense Fund,  
[www.sierralegal.org](http://www.sierralegal.org)

## 8.5 ENVIRONMENTAL ASSESSMENT

### 8.5.1 SITUATION OVERVIEW

- In 1996 the government amended the *Environmental Assessment Act* to permit the use of 'terms of reference' to define the scope of the review of projects falling under the *Act*, such as proposed landfills and highways.
- The MOE applied these amendments in as giving it the ability to waive the requirements of the *Act* that the need for undertakings, and the availability of alternatives to undertakings be reviewed as part of an environmental assessment. Instead, 'terms of reference' were developed for project assessments on a case-by-case basis.
  - *Since 1996, these have rarely included requirements to consider the need for proposed undertakings or the availability of alternatives.*
- In July 2003, the Ontario Divisional Court ruled, in relation to a proposed landfill near Kingston, that the 1996 amendments did not give the Minister of the Environment the authority to exclude consideration of need and alternatives in the environmental assessment process.<sup>95</sup>
- The MOE and the landfill's proponent are currently appealing the Divisional Court's decision.

94. Sutcliffe vs. Ontario (Minister of the Environment), (2003-06-17) ONSC 572-00;622/00 (Referred to as the Richmond Landfill case).

- If upheld, the Divisional Court decision to require that the need for, and availability of alternatives to undertakings that fall under the *Act*, such as landfills and highways, be considered in the environmental assessments of these projects.

#### 8.5.2 WHAT NEEDS TO BE DONE?

- The government of Ontario should withdraw its appeal of the Richmond decision.
- The *Environmental Assessment Act* should be amended to remove the provisions related to ‘terms of reference’ for assessments, and to require that the *Act* apply to major private sector developments as well as public undertakings.

#### 8.5.3 FOR MORE INFORMATION

- Canadian Environmental Law Association  
[www.cela.ca](http://www.cela.ca)