



Clean Air  
*pur* Sudbury



# What is Clean Air Sudbury?

- Aims of Clean Air Sudbury:
  - To encourage continuing improvement of air quality in Greater Sudbury
  - To encourage reduction of green house gases
  - To bring together stakeholders
  - To engage public in discussion, education and action
  - To provide timely access to accurate and relevant air quality information



- **Steering Committee**
  - City of Greater Sudbury
  - Xstrata Nickel
  - INCO
  - Laurentian University
  - Northern Ontario School of Medicine
  - Ontario Ministry of Environment
  - MIRARCO
  - Cambrian College
  - Potvin Air Management Consulting
  - Science North
  - Sudbury & District Health Unit
  - Symbioticware
  - Community

# Selected Activities



- Let's Drive Green: Vehicle Emissions Inspection Clinic (April 19-20, 2005)
  - Approx 185 local motorists took the opportunity to contribute to cleaner air during this time
  - Vehicle Emissions Inspection Clinic hosted by Clean Air Sudbury, EarthCare Sudbury and Environment Canada
  - Vehicles tested for levels of carbon monoxide and hydrocarbons in their exhaust
  - Results: 89% passed the test, 9% failed, 2% were invalid



# Selected Activities

- Public Forum (April 27, 2005)
  - Clean Air Sudbury held their first public Forum
  - The purpose of the forum was to:
    - Present the findings of 'Air Quality Trends: City of Greater Sudbury (1953-2002)'
    - Obtain community perspectives on the proposed goals and actions of Clean Air Sudbury;
    - Showcase air quality initiatives of Clean Air Sudbury Steering Committee members



# Selected Activities

- Car Free Day (September 22, 2005)
  - Clean Air Sudbury teamed up with EarthCare Sudbury
  - Goals of the event:
    - Highlighting the links between air pollution, climate change and vehicle use
    - Promoting sustainable transportation alternatives to the private automobile
    - Receive feedback and ideas from the participants on future activities



# Selected Activities

- FleetSmart Workshop (December 15, 2005)
  - Clean Air Sudbury partnered with EarthCare Sudbury and NRCan
  - Hosted a fuel management information session for companies that own and operate fleet vehicles
  - Approx 13 companies, some with several representatives attended
  - FleetSmart staff at NRCan Outlined:
    - Fuel management concepts
    - various programs and incentives they offer to companies under their program



# Selected Activities

- Earth Day Festival (April 22, 2006)
  - Encouraged and recognized local environmental achievements and initiatives
  - Encouraged local community to focus on environmental issues and take action by implementing sustainable values and solutions every day
  - Clean Air Sudbury Coordinator sat on the organizing committee



- Sudbury Trip Reduction Network Challenge
  - **Project Objectives**
    - Develop and implement strategies for companies to reduce the number of car trips or drive-alone trips for individuals
    - Find 30 local businesses to participate in the program
    - Encourage employees to set up sustainable transportation through ride-sharing, carpooling or the use of public transportation
    - Encourage participants to bike, walk or use alternate sources of transportation



- Project Results
  - 10 companies participated in the challenge
    - consulting firms, engineering firms, educational institutes, a municipal government group and a provincial government agency
  - Total of 19,930 vehicle kilometers were not driven in the community
  - Emissions decrease of
    - 4,384.6 kg of CO<sub>2</sub> emissions
    - 51.8 kg of nitrogen oxides
    - 31.9 kg of hydrocarbons



- Outcomes of the STNR Project:
  - Enhanced recognition of Clean Air Sudbury
    - its mandate of raising awareness of community air quality issues for Greater Sudbury
  - Communication materials, including a comprehensive Trip Reduction Manual Guide promoting trip reduction programs
    - which can be used by any company in the region



# Clean Air Sudbury Upcoming Events

- Spare the Air Day (Tentative for the end April, 2007)
  - Air Quality Education day for Secondary students
  - Held at Dynamic Earth
  - Goal:
    - Have a hands on, interactive learning experience for students
    - Offer a series of demonstrations, experiments, and screen an engaging film to help students better understand atmospheric science
    - Encourage ongoing action for community air quality improvements

**AIR QUALITY TRENDS  
CITY OF GREATER SUDBURY,  
ONTARIO  
1953 – 2002**

**Potvin Air Management Consulting  
June 2004**

# Objectives of the Report

- Summary of the results of air quality monitoring programs in the Sudbury area since the mid-1950s
- Comparisons with other urban centers in Ontario (Toronto, Hamilton, Ottawa, Sault Ste Marie and Thunder Bay for the period 1990 to 2002)

# Key Findings

- Sulphur dioxide concentrations in the City of Greater Sudbury decreased by 50% immediately following the abatement measures undertaken in 1972
- Since 1999, the frequency of exceedance of the 1-hour criterion has fallen 85% from the early 1990s
- For the period 1990 to 2002, Sudbury had the 3rd highest composite SO<sub>2</sub> mean from seven Ontario cities selected for comparison
- Sudbury had the highest composite annual ground-level ozone concentrations of the cities selected for comparison

# Key Findings (Continued)

- The levels of suspended particulate matter were generally low and well within provincial criteria
- Concentrations of TSP gradually decreased by about 36% from the early 1970s
- The levels of inhalable particles were also low and fell by 33% from the early 1990s.
- Compared to other selected cities, Sudbury had the 3rd lowest composite mean for TSP and the lowest composite mean for inhalable particulate
- During the period 1989 to 2001, good to very good Air Quality Index readings were reported more than 94% of the time.

# Next Step

- Update the Report
- The update will include recent information and data regarding TSP, PM<sub>10</sub> and SO<sub>2</sub> since the last report, 2002
- Also, will include the respirable fraction (PM<sub>2.5</sub>)

# Why it needs to be Updated?

- Poor image of the Air Quality around Sudbury
- Constant need to keep the community aware that their involvement can better our air quality

# Ontario Trillium Foundation Grant Approval



**Community Air Quality Monitoring in School  
Yards in the Sudbury Area**

## Objectives:

- Undertake a research project to monitor air quality in and around selected school yards in the Sudbury area
- Project Objectives and Goals
  - Incorporate aspects of research including:
    - Monitoring, data gathering, statistical analyses and report production
  - The project will be combined with an educational component:
    - Entails student/teacher interaction, curriculum enhancement and presentations by local air quality professionals
  - Allow students to become familiar with state-of-the-art air quality and meteorological monitoring equipment
    - A demonstration will be done on how the equipment is used by professionals
  - To measure air quality and ultimately link results to potential to impacts on humans and the surrounding ecosystem

- **Project Details**

- The project will be undertaken in two segments
  - Air monitoring equipment will be set up at two schools in the Sudbury area in early March and will run for a period of one month
    - Lockerby Composite High School
    - Confederation High School
  - A second monitoring session will be held in the spring (April) at two different schools in the Sudbury area
- Grade 11/12 level has been chosen to host the project
- The classes will learn:
  - about the equipment,
  - how to gather and process the data
  - summarize results in charts and graphs.

- The Students Will -
  - Sound research, critical thinking and communication skills as they utilize the analytical equipment
  - An understanding of why data is collected and will discuss the implications of that data for the community
  - Knowledge of potential future career in ecological monitoring and evaluation
  - Develop practical skills that can easily be transferred to the workplace
  - Teach youth about existing local air quality issues and their potential impact on human health and the ecosystem

# Funding Secured for the Project

- Ontario Trillium Foundation
  - \$73,000
- INCO
  - \$7,000
- Xstrata Nickel
  - \$7,000
- Requested from City of Greater Sudbury
  - \$7,000 (Trillium Project)
  - \$5,000 (Air Quality Report)
  - \$3,000 (Ongoing CAS projects)