Clean air is vital to our existence and strongly linked to our quality of life. In Greater Sudbury, air pollution caused by past methods of mineral processing contributed greatly to the area being barren of vegetation cover. But in recent decades, the local mining industry has advanced remarkably, and local air quality trends have improved. Greater Sudbury now has cleaner air than several Southern Ontario centres and comparable air quality to cities in Northern Ontario. Despite the tremendous improvement, public perceptions of Greater Sudbury’s air quality are still largely influenced by the past. For Greater Sudbury to be considered a more livable community, we need to clear up these misperceptions too.

Of course, continued actions to reduce air pollution are also necessary. We must find ways to tackle continuing air quality threats and to minimize local emissions of air-borne pollutants that could affect air quality elsewhere.

Goal: A reputation for excellent air quality in Greater Sudbury.

What YOU can do

- Trade in your inefficient woodstove for a low-emission model.
- Use low-VOC solvents, paints and surface coatings.


## Threats

### Ground-Level Ozone ($O_3$)

Ground-level ozone – a prime ingredient in smog – is one of the most significant air pollutants of concern in Greater Sudbury. Unfavourable local air quality readings are most often triggered by increased concentrations of ground-level ozone. A significant part of this problem is beyond local control however; more than half of the ground-level ozone measured during widespread smog episodes originates in the United States. In North America, automobile exhaust and energy generation from power plants are major contributors to the formation of ground-level ozone and smog.

### Sulphur Dioxide (SO$_2$)

Sulphur dioxide (SO$_2$) is one of the by-products of metal smelting. It can aggravate existing respiratory health problems, damage trees and crops, and contribute to acid rain. Since 1960 SO$_2$ emissions from local smelters have declined by 93%, but hundreds of kilotonnes of SO$_2$ are still emitted every year, and occasionally local weather conditions will cause SO$_2$ concentrations to exceed the provincial 1-hour criterion.\(^{a21}\) Transportation and fuel combustion also contribute to increased SO$_2$ concentrations, however about 99% of SO$_2$ emissions in Greater Sudbury are due to local smelting operations.\(^{a22}\)

### Particulate Matter (PM)

These tiny particles can travel deep into our lungs, causing irritation and respiratory illnesses. They can be emitted naturally, such as from wind-blown dust, or formed through chemical reactions. Particulate matter is one of the main components of smog and, like ground-level ozone, a significant portion is imported into Greater Sudbury during smog episodes. Residential, transportation and industrial sources contribute almost equally to urban concentrations of PM$_{2.5}$ (particles ≤ 2.5 microns) in Ontario.

### Metals

While metals are a natural part of the environment, the mining and smelting of these resources causes small particles containing metals to be released through smokestacks and as wind-blown dust from fugitive sources. Particulate metal emissions from mining and smelting in Greater Sudbury have decreased over time together with SO$_2$ emissions. However, further reductions in emissions of SO$_2$ and metals in particulate matter remain one of the top environmental priorities for the mining sector in Greater Sudbury and for the Ministry of the Environment.

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### What YOU can do

- Participate in vehicle emission reduction programs.
- Maintain your oil furnace to keep it burning more efficiently.
Objectives & Actions

**OBJECTIVE**
Regularly communicate local air quality information to the public.

EarthCare Sudbury Partners will:
- Summarize and report local air quality information
- Create opportunities for public dialogue about local air quality issues
- Provide information on local air quality to municipal decision makers
- Initiate awareness campaigns on health issues associated with poor air quality
- Ensure Greater Sudbury continues to be included in provincial and national air quality reports

**OBJECTIVE**
Consistently achieve zero exceedances of Ontario’s Ambient Air Quality Criteria by 2015.

EarthCare Sudbury Partners will:
- Continue to invest in emission reduction technology in their operations
- Participate in Ontario’s Drive Clean Program for heavy duty vehicles
- Collaborate with other Ontario communities to address air quality issues
- Use solvents, paints and surface coatings with low or no volatile organic compounds (VOCs)

**What YOU can do**
- Limit use of gas-powered yard maintenance equipment.
- Keep off-road recreational vehicles well maintained.

View Ontario’s ambient air quality criteria
Objectives & Actions con’t

OBJECTIVE
Further reduce concentrations of common air pollutants produced through activities typical to Northern Ontario.

EarthCare Sudbury Partners will:
• Implement programs that engage individual Sudburians in improving air quality (See Transportation Section for actions relating to vehicle emissions)

What YOU can do
• Develop fuel efficient boating habits.
References


Monitoring References

Smog Advisory Statistics
AQI Readings
Clean Air Sudbury Air Quality Trends Report

What YOU can do

Drive less.