

# **TORONTO** STAFF REPORT

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June 23, 2003

To: Board of Health

From: Dr. Sheela V. Basrur, Medical Officer of Health

Subject: The City of Toronto Corporate Smog Alert Response Plan: Status Report

Purpose:

To report on the implementation of the City of Toronto Corporate Smog Alert Response Plan and the impact of smog alert days on the delivery of City services.

Financial Implications and Impact Statement:

This report has no direct financial implications.

Recommendations:

It is recommended that:

- (1) the Commissioner of Works and Emergency Services, as Chair of the Toronto Interdepartmental Environment Committee (TIE), ensure that the City's Corporate Air Quality Strategy includes consideration of year-long corporate actions by City Divisions, Agencies, Boards and Commissions that reduce smog; and
- (2) the appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

Background:

In May 1998, City of Toronto Council adopted a comprehensive smog action plan. The Corporate Smog Alert Response Plan involves City Divisions, Agencies, Boards and Commissions (ABCs) developing smog alert response plans specific to their functions. These divisional response plans include modification of smog producing activities on smog alert days

such as suspending non-essential use of vehicles and gas-powered equipment; suspending asphalt work; or refuelling vehicles and equipment during non-sunlight hours. Detailed divisional response plans are posted on the City of Toronto internal Intranet Web site and are updated on an annual basis.

Representatives from most divisions plus ABCs participate in a Corporate Smog Alert Response Plan (CSARP) implementation team chaired by Public Health. The CSARP implementation team meets at least twice a year: before and at the end of the typical smog season; and on an as needed basis to oversee the implementation of divisional response plans. Since 2000, the responsibility for co-ordinating smog alert notification across the Corporation has been a collaborative effort between Toronto Public Health and Corporate Communications.

At the July 2002 Board of Health meeting, the Medical Officer of Health was requested, in consultation with appropriate City officials, to report to the Board on the number of smog alert days in 2001 and 2002, and how smog alert days impact on the delivery of City services.

Public Health, as Chair of the Corporate Smog Alert Response Plan implementation team, requested City Divisions and ABCs from across the Corporation to provide information regarding the impact of smog alert days on the delivery of their services. City Divisions and ABCs were also requested to forward a copy of their most up-to-date divisional response plan, including activities to reduce air pollution year round.

#### Comments:

##### (A) City of Toronto Corporate Smog Alert Response Plan

The City of Toronto Corporate Smog Alert Response Plan was the first in Canada. Since the program was implemented in 1998, the City has been a leader in improving air quality. The implementation of the Corporate Smog Alert Response Plan is one way the City of Toronto demonstrates its commitment to smog reduction. The City of Toronto has also assisted many municipalities across the province in developing similar programs. Most municipalities that participate in the Greater Toronto Area Clean Air Council now have corporate smog alert response plans.

The City of Toronto Corporate Smog Alert Response Plan encourages behavioural change to help improve air quality in the City. The aim of the plan is to reduce the health impact of smog by adoption of personal protective measures, and to improve air quality by reducing air emissions. The modification of smog producing activities by City Divisions, Agencies, Boards and Commissions can help lessen the impact poor air quality has on high risk individuals (e.g., seniors, children and those with pre-existing heart and lung problems).

The Corporate Smog Alert Response Plan's educational component provides information and encourages staff and residents of the City of Toronto to take actions to reduce smog and improve air quality. It is the goal of the Corporate Smog Alert Response Plan that staff, by committing to

short-term behavioural change on smog alert days, will translate such practice to long-term behavioural change that could go beyond the workplace environment.

(B) Ontario Smog Advisory System

The Ontario Smog Advisory System is a proactive system designed to forecast episodes of high air pollution and motivate individuals and municipalities to take steps to reduce air emissions. Smog advisories are issued by the Ministry of the Environment when there is a strong likelihood that a smog day is coming within 24 hours, or if a smog day has happened without warning and weather conditions conducive to elevated smog are forecast to continue for six hours. The purpose of the Smog Advisory System is to provide advance warning to residents of poor air quality so they can plan to protect themselves from exposure to high levels of air pollutants, and to modify their activities and thus reduce further air emissions.

When a smog advisory is issued by the Ministry, the City of Toronto Medical Officer of Health issues a corporate smog alert, at which time the City's Corporate Smog Alert Response Plan comes into effect. City Divisions and Agencies, Boards and Commissions are notified of the smog alert via a broadcast email and phone message. Fax notifications are also sent to outside facilities for staff who do not have phone or email access.

(C) Smog Alert Days in Toronto

Toronto experienced the largest number of smog alerts in 2001 and 2002 since the provincial smog warning system came into effect in 1993 (Figure 1). May 3, 2001 marked the earliest smog alert issued in a typical smog season (May through September). Furthermore, 2001 was notable for the unusually long duration of its smog alert episodes. Two of these episodes in 2001 lasted for five days each (Table 1) and coincided with extreme heat events at that time. In 2002, there were 18 smog alert days for the City of Toronto. Although it is not possible to assess a trend in smog alerts based on only a 10-year record, it is reasonable to expect an increase in smog alerts if the current global warming trend continues.

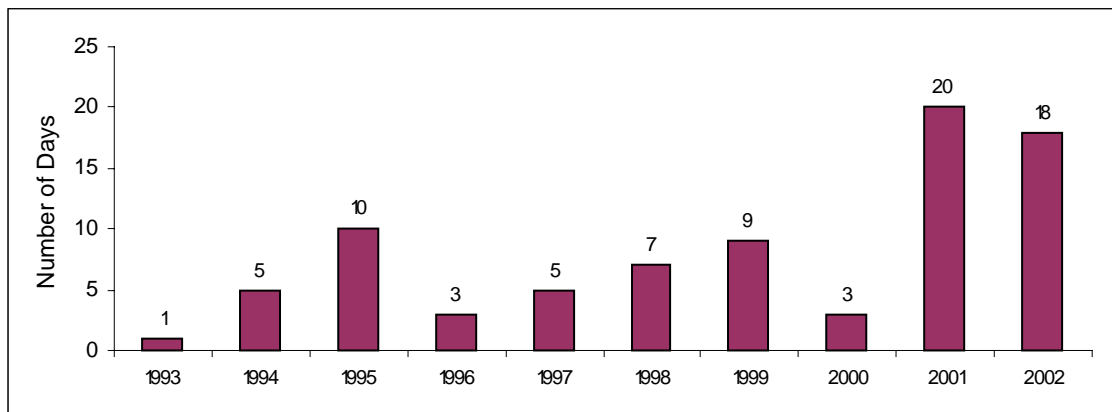


Figure 1 - Number of Smog Alert Days in Toronto

(Note: Smog alert days for Toronto are recorded according to the smog advisories issued by the Ontario Ministry of the Environment)

Table 1 - Smog Alert Days recorded for the City of Toronto 2001-2002

Smog Alert Days 2001	Duration (days)	Smog Alert Days 2002	Duration (days)
May 3	1		
June 14, 15	2	June 20, 21	2
June 19	1	June 23	1
June 26, 27, 28, 29, 30	5	June 25	1
		June 30, July 1, 2	3
July 20, 21, 22, 23, 24	5	July 8	1
July 31, August 1, 2	3	July 17	1
		July 21, 22	2
August 7, 8, 9	3	August 1	1
		August 11, 12, 13	3
		September 8, 9, 10	3
TOTAL:	20 days	TOTAL:	18 days

(D) Impact of Smog Alert Days on the Delivery of City Services

In response to the request for information on how smog alert days impact on the delivery of City Services, Public Health received feedback from a total of 12 divisions as shown in Table 2.

Table 2 - Divisions Commenting on Impact of Smog Alert Days

Department	Division
Community & Neighbourhood Services	Public Health Homes for the Aged Children Services
Economic Development, Culture & Tourism	Parks and Recreation
Urban Development Services	Municipal Licensing and Standards
Works & Emergency Services	Solid Waste Management Transportation Services
Corporate Services	Facilities and Real Estate Corporate Communications Corporate Fleet Services Occupational Health and Safety
Chief Administrator's Office	Strategic and Corporate Policy/Healthy City Office

While there have been a variety of impacts reported, most Divisions find that implementing their divisional response plan does not adversely impact City operations:

- (a) Homes for the Aged – reported that their divisional response plan was well implemented
- (b) Municipal Licensing and Standards – reported no impact on operations
- (c) Solid Waste Management – reported negligible impact on the level of service provided
- (d) Facilities and Real Estate – reported no negative impact
- (e) Corporate Communications – did not report any impact
- (f) Corporate Fleet Services – reported no adverse impact on operations
- (g) Strategic and Corporate Policy/Healthy City Office – did not report any impact

Divisions continue to review their response plans on an annual basis, and to find opportunities to minimize disruptions to the delivery of City services on smog alert days. Listed below are Divisions that have reported an impact – both positive and negative – on service delivery as a result of the increasing number of smog alert days.

#### Public Health, Community and Neighbourhood Services

The increasing number of smog alert days does not have any adverse impact on Toronto Public Health's operations and/or staff resources. Instead positive impact was experienced. Due to the increasing concerns related to air pollution, Toronto Public Health has taken the opportunity to develop and implement additional education and outreach initiatives, and to increase staff and public awareness on precautions they can take to protect their health and that of the environment. These initiatives are year round although smog alert days provide heightened awareness for staff and the public.

Initiatives include:

- (a) Maintaining a recorded Smog Alert Phone Line to provide information on smog alerts in the City of Toronto;
- (b) Providing smog alert notification on the Public Health home page on the City Web site;
- (c) Developing and distributing educational materials;
- (d) Submitting articles to newsletters and magazines, both internal and external to the City;
- (e) Providing “lunch’n learn” and “train-the-trainer” education sessions within the City and at other workplaces;
- (f) Conducting presentations to day camps and other community groups;
- (g) Participating in environmental and health displays; and
- (h) Implementing the 20/20 The Way to Clean Air social marketing campaign in the Greater Toronto Area.

#### Children Services, Community and Neighbourhood Services

On smog alert days the children enrolled in Directly Operated Child Care Sites and the Home Child Care Program do not participate in outdoor active play. Staff meet this programming challenge by providing active play opportunities inside. There is no impact on staff resources.

At times, field trips have been postponed or cancelled due to smog alerts. Childcare providers are encouraged to plan outdoor field trips during the spring/fall when smog alerts are less common.

#### Parks and Recreation, Economic Development, Culture and Tourism

Since corporate smog alert notification does not operate on a 24/7 basis, many of the Parks and Recreation staff who begin work early (before 8:30 a.m.) have faced challenges. When corporate smog alert notifications are received after staff have been assigned work, they have to be called back to be re-assigned duties. Finding alternate work for staff has been difficult at times. This situation should improve for 2003. A corporate smog alert notification email box has been set up for use in 2003, to which direct email notification of a smog alert from the Ministry of the Environment will be sent. Staff across the Corporation who require immediate 24/7 smog alert notification services will now be able to receive smog alert information quickly so that alternate work can be planned and carried out.

Mowing activities are re-scheduled on smog alert days except where absolutely required (e.g., for golf courses and sportsfields). At times, this has resulted in the Division receiving complaints regarding high grass. Cutting grass in response to complaints also took longer as a result of mowing activities being suspended on smog alert days. In general, modification of mowing activities for one or two-day smog alerts can be accommodated more easily than those that last up to five days. However, five-day smog alerts are unusual.

#### Transportation Services, Works and Emergency Services

The impact of smog alert days experienced by the Transportation Services division range from low to high, depending on the services:

- (a) Low impact – as part of the divisional response plan, vehicles are refuelled after hours on a smog alert day. Vehicles can usually operate up to two days without refuelling. However should the smog days persist, staff would likely have to refuel vehicles on an overtime basis.
- (b) Medium to low impact – suspending oil-based line painting on smog alert days could result in safety and liability concerns (traffic accidents) when vehicles pass on a road requiring lane line maintenance. Road closure is not always a viable alternative as this could result in additional traffic congestion on alternative routes. In addition, experience has shown that a delay in grass cutting on smog alert days can have an impact on scheduling and render the service coordination less efficient. Impact is greater in late spring or early summer when the grass is growing faster. The impact on suspending normal street sweeping of all roadways is minimal if there are only a few smog alert days. However for special events, such as Caribana, the impact would be significant so that the sweeping operation would need to continue even on a smog alert day.
- (c) High impact – suspending asphalt work on a smog alert day could impact road maintenance programs such as utility cut repairs (e.g., when large open cuts in the road

are required for utility works) and overlaying/road paving. This could result in safety concerns for both vehicles and pedestrians passing through the area. At times when such openings cannot be paved over and/or barriers cannot be placed, road closure can result in additional traffic congestion on alternate routes. In addition, by delaying some repair work the resulting traffic congestion adds to increased smog levels. Due to the number of smog alert days Toronto experienced in a short construction season, approximately 15 to 20% of various paving operations fell behind schedule in 2002.

#### Occupational Health and Safety, Corporate Services

Occupational Health and Safety staff indicated that few employee health and safety concerns related to smog during 2001-2002 were reported. There were no reported work refusals related to work in "smog alert" conditions. A number of employees with asthma reported breathing problems in working outdoors and/or getting to work on heavy smog days and their accommodation requests were addressed.

#### (E) Year-long Smog Reduction Practices

Since the end of August 2002, the Ontario Ministry of the Environment has included PM<sub>2.5</sub> in Ontario's Air Quality Index (AQI). PM<sub>2.5</sub> (fine particulate matter less than 2.5 micrometers in diameter) has been linked to a number of heart and lung related health effects. The inclusion of PM<sub>2.5</sub> in the AQI may lead to an increase in the number of times Toronto's air quality hits the "poor" category and may increase the number of smog alerts being issued in Ontario. Smog alerts will also likely be issued outside of the typical ozone season of May through September. As a result, there is a need for the Corporate Smog Alert Response Plan to incorporate modification of activities that are to take place on smog alert days during the non-summer months. This is an opportunity for the City to consider promoting year-long departmental smog reduction activities.

A number of City Divisions are already implementing smog reduction practices on a year-long basis so that pollution emissions are reduced throughout the year, not just on smog alert days.

These activities include:

- (a) Telecommute (i.e. working from outside a regular office) when possible
- (b) Purchase/exchange paint supplies that produce fewer emissions
- (c) Use natural gas and propane fuelled vehicles/equipment
- (d) Maintain fleet vehicles on a regular basis to minimize unnecessary emissions
- (e) Educate taxicab drivers on the Idling Control by-law
- (f) Stress routine maintenance of taxicab vehicles so they run at optimum performance
- (g) Car pool and use public transit when practical

(F) Corporate Air Quality Strategy

In April 2000, City Council endorsed the Toronto Environmental Plan. One of the Environmental Plan recommendations stated that a comprehensive air quality strategy needs to build on, integrate and coordinate existing efforts to improve air quality in the City of Toronto. An Air Quality Strategy Interdepartmental Working Group (AQSI Working Group) was formed to consider the development of air quality strategy for the City of Toronto. Since the Corporate Smog Alert Response Plan is one element of a comprehensive smog action plan that was adopted by City Council, it is important that its implementation is incorporated into the workplan of the Corporate Air Quality Strategy. Given the potential increase in the number of smog days due to the inclusion of PM<sub>2.5</sub> in the provincial Air Quality Index, it is important that the Corporate Air Quality Strategy consider year-long city and departmental actions that reduce smog.

Conclusions:

The implementation of the Corporate Smog Alert Response Plan aids in improving air quality in the City of Toronto. The response plan also provides information and encourages staff and residents of the City of Toronto to take actions to reduce smog and improve air quality. The Corporate Smog Alert Response Plan is now being adopted by many municipalities who are part of the Greater Toronto Area Clean Air Council.

While the implementation of the Corporate Smog Alert Response Plan does not adversely impact most City operations, when smog alert episode are prolonged, some City services such as lawn cutting and road paving may be affected. Divisions that are affected have continued to monitor their divisional response plans to find ways to lessen the adverse impacts of complying with their plan.

The inclusion of PM<sub>2.5</sub> in Ontario's Air Quality Index is likely to increase the number of smog alert days in the City of Toronto. Smog alerts may also be issued outside of the typical ozone season of May through September. It is therefore important to address air quality and smog as a year round problem where year-long smog reduction activities need to be promoted.

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