

**APPENDIX 'C'**

**TOWN OF MARKHAM**  
**SMOG ALERT RESPONSE PLAN**  
**2003**

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## **Introduction**

On October 23, 2001, Town of Markham Council approved the formation of a Clean Air Working Group (CAWG) comprised of Members of Council and staff. Council members include Ward II Councillor Erin Shapero (Chair), Deputy Mayor Frank Scarpitti, Regional Councillor Tony Wong, Andy Taylor (Corporate Services), Victoria McGrath (Community Services) and Lilli Duoba (Development Services). The working group has a mandate to formulate policy, identify short and long-term objectives and promote Markham's successes in improving air quality.

On June 21<sup>st</sup>, 2002, political representatives from the Greater Toronto Area Clean Air Council (GTA CAC) jurisdictions gathered at the CN Tower to sign the 2002 Inter-governmental Declaration on Clean Air. In the summer of 2002, the CAWG began investigating plans to establish a local smog plan for the Town of Markham. The Smog Alert Response Plan (SARP) was developed as a result of this initiative.

The Ontario Ministry of the Environment (MOE) has produced a document "Smog Alert, A Municipal Response Guide", which provides a list of actions that can be undertaken by municipalities to reduce smog. Corporate Smog Plans for the Region of Halton, Region of Peel, City of Niagara, Region of Waterloo, York Region, City of Toronto, City of Mississauga and City of Hamilton were also investigated.

The Town of Markham's SARP includes a smog-e-mail notification system, revised operational modifications, and a communication strategy for providing smog awareness to the staff and the public.

## **Sources of Smog and its Health Effects**

Smog refers to hazy air that most often occurs on hot summer days when heat and sunlight react with gases and fine particles in the air. Most of smog's ingredients are released by human activity.

The main sources of the human-made chemicals that make up smog in Ontario are gasoline-powered vehicles (66%), industrial combustion processes (e.g. Coal-burning electric generating plants) and natural and man-made sources of Volatile Organic Compounds (VOCs, e.g. Gasoline vapor, oil-based paints and cleaning solvents). Fine

particles (e.g. PM10) are by-products of fossil-fuel combustion (e.g. gasoline, diesel, and natural gas). Primary sources are industrial processes, vehicle emissions and residential heating.

Its main components, ground-level ozone, harmful gases and fine particulate matter, have serious effects on human health. Health impacts include eye, nose and throat irritation, coughing, wheezing and shortness of breath, aggravation of heart and lung conditions and lowered resistance to infections for those with weakened immune systems.

Young children, seniors, people suffering from asthma and those with heart and lung problems are most affected by smog. However, healthy individuals are also included. In other words, even though people's sensitivities to smog vary a great deal, the more smog we breathe, the more likely we are to experience adverse health effects.

In Ontario, the Ministry of the Environment (MOE) reports daily on the Air Quality Index (AQI). The AQI is based on six pollutants that have adverse effects on human health and the environment: sulphur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), total reduced sulphur (TRS) and suspended particles. Air quality is monitored at a network of sites across the province and at the end of each hour the concentration of each pollutant measured at a particular site is converted into a number. The calculated number for each pollutant is called a sub-index and the highest sub-index at the given hour becomes the AQI.

The AQI is rated as follows:

0-15 (very good): no known harmful effects

16-31 (good): no known harmful effects; slight odour

32-49 (moderate): odour; respiratory irritation in sensitive people during vigorous exercise

**50-99 (poor): odours; increased symptoms in those with cardio-respiratory diseases.**

**100+ (very poor): increasing or serious symptoms for those with cardio-respiratory diseases**

When the index is forecast to be high enough so that health is at risk (AQI = 50 or greater) and combined with certain weather patterns, the MOE issues an Air Quality Advisory to medical officers of health and the media.

Days when the AQI goes over 50 are usually referred to as “Smog Alert Days”. These days are most likely to occur between May and September. The following is the list of smog advisories and smog days comparing York Region (including Markham), City of Toronto, Ottawa, Windsor, and North Bay, for the years 2001 and 2002. For the number of smog advisories issued, and the total number of days covered by the smog advisories, for the five Ontario smog advisory regions listed below for the years 1993-2002, please see Appendix D.

**Seasonal History May-September 2001 and 2002**

<b>Region</b>	<b>2001</b>		<b>2002</b>	
	<b>Advisories</b>	<b>Days</b>	<b>Advisories</b>	<b>Days</b>
<b>North Bay</b>	4	10	1	3
<b>Ottawa</b>	6	14	3	6
<b>Toronto</b>	7	20	9	18
<b>York Region</b>	<b>7</b>	<b>20</b>	<b>9</b>	<b>18</b>
<b>Windsor</b>	7	23	10	26

York Region, including the Town of Markham, is likely to see the number of smog days experienced between May and September increase in the summers to come. Close monitoring of the AQI will be very important not only corporately, but also for the community. As a leader, the Town of Markham is committed to making the community aware of the occurrence of these smog days as well as the actions that can be taken when AQI levels rise above 50.

## **Markham's Smog Alert Response Plan 2003**

The SARP includes a notification procedure, which alerts staff of the MOE advisory, specific operational responses in Town Departments, a communications strategy and an evaluation strategy. The Town of Markham is also looking into what it can do with regard to long-term smog reduction strategies (see Table 1 for examples of longer-term reduction strategies). Table 1 outlines what the Town of Markham has committed to do as a result of participating in the Toronto 2002 Inter-governmental Declaration on Clean Air.

The Town of Markham's SARP will consider actions that can be taken on "Smog Alert Days" as well measures that would positively impact air quality year round.

### **Proposed Notification Procedure:**

#### **Purpose**

The purpose of the notification procedure is to provide lead-time to staff to allow them to make the necessary arrangements for the following day's work schedule that will reduce their contribution to smog-causing pollutants and conserve energy.

#### **Background**

The MOE provides the public with **two e-mail notice levels**:

- A **Smog Watch** is issued when there is at least 50% chance that smog conditions will occur within the next three days. At this time, staff can voluntarily walk to work, take public transit, use their bicycles and start to minimize energy use by turning down their air conditioners.
- A **Smog Advisory (Smog Alert)** is issued when there is a high probability of a smog day occurring within the next 24 hours. At this point, operational modifications will be made and operational responses will begin.

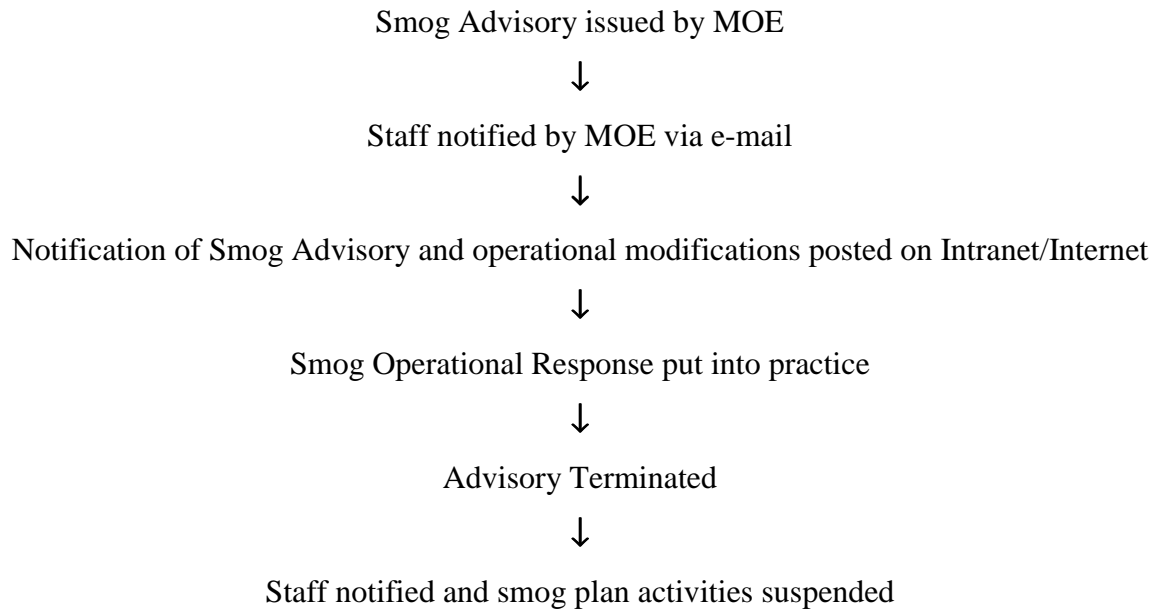
**NOTE: The Smog Advisory issued by the MOE is the equivalent to the Town of Markham's "Smog Alert".**

When the Air Quality Index readings decrease, the MOE issues a **Termination notice** that the smog advisory has been lifted (see Table 2 for examples of the notices MOE send

out with regards to Smog Advisories and Terminations as well as how you can become a member of the Smog Alert Network).

### **Discussion**

The staff at the Town of Markham will be notified of the Smog Advisory through **direct contact**. The MOE, via the Smog Alert Network, notifies all Town staff directly of the Smog Advisory by fax or email:



A list of actions that staff can pursue on a business and personal level can be found in Appendix A.

## **2.0 Operational Responses**

### **Purpose**

The purpose of the operational procedure within Markham's SARP is to identify operational modifications to the Town's activities during **Smog Alert Days** (when a Smog Advisory is called) that help reduce air pollution that contributes to smog.

### **Options/Discussion**

There are a variety of strategies that can be implemented by the affected divisions and departments within the Town of Markham when a smog alert is called that address the problem of smog including:

**1. Corporate Wide** – Each division/department will be asked to identify the operational modifications that can be undertaken on Smog Alert Days. These operational modifications can be found in Appendix A and could include:

- Reduce use of gasoline or diesel powered equipment where possible (lawn mowers, leaf blowers)
- Suspend pesticide spraying
- Suspend use of oil-based paints, solvents and cleaners
- Reduce road re-surfacing
- Suspend street sweeping
- Reduce vehicle use (trip reduction actions, alternative work arrangements)
- Reschedule refueling of essential vehicles (early or late in the day)
- Set revised temperatures on air conditioning units (1-2 degrees Celsius warmer – Tania to see if MOE has a recommended #)
- Allow staff to dress casually
- Reduce lighting use

**2. Department Level** – In future, management and staff could prepare individual SARPs for each department. Each departmental SARP will be used to identify the modifications that can be undertaken on Smog Alert Days (Please refer to Table 4 for an example of a divisional SARP).

When a Smog Advisory is called by the MOE, each department would implement the action listed in Appendix A that are most suitable for each division/department.

In terms of creating a mechanism for evaluation to help with the planning for future smog seasons, after the termination notice is sent out, a questionnaire sent to each department would be filled out. The percentage of modified activities and the number of employees affected could provide the Key Performance Indicators.

With regard to contract holders (suppliers), the Town of Markham will encourage contractors to postpone activities that contribute to fine particulate and ozone precursor

emissions such as road resurfacing, grass cutting, pesticide spraying and painting. However, the Town of Markham is also aware that compliance by contractors is voluntary and the Town will not pay additional costs associated with work stoppage (see Appendix B for an example of a letter that can be given to the contractors before they begin working).

### **3.0 Communications Plan**

#### **Purpose:**

The communications plan will promote actions that minimize the impact of smog-causing emissions and communicate important smog messages to staff and the public before and throughout the smog season.

#### **Discussion**

The Town's SARP includes both internal and external communications strategies, with the following objectives. The Town of Markham is committed to:

- Raising awareness about smog and what causes it
- Raising awareness about the effects of smog on human health and the environment
- Raising awareness of how to reduce the health risks of exposure to smog
- Educating the chosen target audiences (how they can help reduce smog and about the benefits of taking smog reduction actions)
- Generating media attention about smog, its effects, how to reduce it and the benefits of taking smog reduction actions

### **3.1 Internal Communications Strategy**

Target audiences for the internal communications strategy will include the Town's employees and Councillors. The internal communications strategy includes a staff training component, educational component and an Intranet/Internet and E-mail component. A more detailed description of these components can be found in Appendix A.

### **3.2 External Communications Strategy**

Target audiences for the external communications strategy will include residents of the Town of Markham, the media and businesses. The Town of Markham can use many methods to help increase community awareness about smog and ways of reducing its impact on both health and the environment. A list of strategies can be found in Appendix A.

#### **4.0 Plan Evaluation**

##### **Purpose**

The Town of Markham's SARP will be evaluated to assess staff awareness and understanding of smog, operational issues and whether behavioral changes occurred.

##### **Discussion**

The development of "indicators of success" and plan evaluation measures is very important. Therefore, after the smog season and after each individual smog alert, the success of smog response strategies must be measured. Evaluation measures include:

- Surveying the community (internally/externally)
- Developing benchmarks or performance measures to determine whether the plan was implemented and to what degree (E.g. Questionnaire – please refer to Appendix C)
- Assessing barriers
- Measuring the impact of modified activities on air quality
- Tracking the number of visits on websites

#### **5.0 Conclusions**

Smog is one of the most persistent air quality issues in Ontario and is linked to various human health effects. Reducing smog-related emissions will have multiple benefits because these chemicals play a role not only in smog but also climate change and acid rain. The benefits of reducing smog are far-ranging and include:

- Improved air quality
- Improved health for people not only in Markham but provincially and globally
- Improved awareness of environmental issues
- Reduced impact on agriculture

- A healthier environment

The Smog Alert Response Plan is a first step to reducing emissions in the Town of Markham that contribute to smog. The actions taken by the Town will encourage other community organizations and businesses to consider similar actions that further reduce emissions.

#### **SELECTED REFERENCE MATERIAL**

The City of Waterloo, **City of Waterloo Clean Air Plan**, August 25, 1999

A Halton Public Sector Smog Response Plan, “Leading the Way to Cleaner Air”, October 1999, Revised November 2001,  
[www.region.halton.on.ca/health](http://www.region.halton.on.ca/health)

Region of Peel Smog Plan, Draft: The Region of Peel

City of Mississauga Smog Alert Response Plan 2002: City of Mississauga

2001 Corporate Smog Alert Response Plan, Summary Report: Health Promotion and Environmental Protection Office Toronto Public Health, October 2001

Smog Alert. A Municipal Response Guide: Ontario Ministry of the Environment, May 1999.

Towards a Smog Plan for Ontario: Ontario Ministry of the Environment and Energy, July 1996

Corporate Smog Response Plan 2000: Region of Hamilton-Wentworth



**TABLE 1**  
**List of Longer-Term Smog Reduction Strategies**  
**Town of Markham**

<b>Longer-Term Smog Reduction Strategies</b>	<b>Summary Description of Actions Taken and Potential Actions</b>
<b>The development of green fleet policies, which encourage the use of alternate fuel-powered fleet vehicles.</b>	- Markham's Green Fleet Pilot Project
<b>Promote employee car or van pooling and to promote walking and cycling initiatives to reduce car usage.</b>	4. Town of Markham's Traffic Demand Management Program - Investigating the potential for bicycle and pedestrian trails and corridors
<b>Develop targets for energy conservation</b>	- Town of Markham is investigating the potential for implementing a Green Roof on the City Center Roof.
<b>Contribute Municipal support for the Kyoto Protocol</b>	- The Town of Markham is participating in the Municipal Leaders Forum on Implementing Kyoto in April 2003, in Regina, Saskatchewan
<b>Consider/Encourage increased naturalized areas for all public lands in order to reduce lawn cutting and pesticide use.</b>	- The Town of Markham has undertaken a pesticide pilot program in Town parks. The Town has worked in partnership with community groups to naturalize park areas by planting trees, shrubs and wildflowers.

**TABLE 2**  
**THE MINISTRY OF THE ENVIRONMENT SMOG ALERT NETWORK**

<p><b>What is the Smog Alert Network?</b></p>	<ul style="list-style-type: none"> <li>• A notification service that provides warning that poor air quality may be on its way. Those who subscribe will receive 3 types of Smog Alerts (Smog Watch, Smog Advisory and Termination notice. To join please visit the Ministry of Environment web page at <a href="http://www.airqualityontario.com">www.airqualityontario.com</a></li> </ul>
<p><b>What will the Smog Advisory E-mail to Staff look like?</b></p>	<p>The Ontario Ministry of Environment has issued a Smog Advisory for .....</p> <p>A Smog Advisory is issued when there is a strong likelihood that there may be poor air quality within the next 24 hours. Most smog advisories are due to ground level ozone, but they may also be due to sulphur dioxide, nitrogen dioxide, total reduced sulphur compounds, carbon monoxide, or suspended particles.</p> <p>To protect your health and help improve air quality during this period, the Town of Markham is asking departments to initiate their smog response plans. The strategies include:</p> <ul style="list-style-type: none"> <li>• Postponing, where possible, activities that use gas powered equipment</li> <li>• Notifying contractors of smog advisories</li> <li>• Delaying use of discretionary vehicles, <b>etc....</b></li> </ul> <p>Area residents and Town staff are also urged to:</p> <ul style="list-style-type: none"> <li>• Walk, bike, take the bus, or carpool</li> <li>• Avoid using liquid barbecue starters, <b>etc...</b></li> </ul> <p>Smog can cause:</p> <ul style="list-style-type: none"> <li>• Eye, nose and lung irritation, <b>etc....</b></li> </ul> <p>The Medical Officer of Health advises residents who suffer from allergies, or heart disease, or asthma, emphysema, chronic bronchitis or other chronic lung conditions that their symptoms may be made worse by exposure to smog. All residents are encouraged to:</p> <ul style="list-style-type: none"> <li>• Avoid strenuous activities</li> <li>• Remain indoors in cool places as much as possible, <b>etc....</b></li> </ul> <p>Staff will be notified upon cancellation of this advisory</p> <p>Individuals with questions can visit the Ministry of Environment and Energy web site at <a href="http://www.airqualityontario.com">www.airqualityontario.com</a></p>
<p><b>What will a Termination Notice look like?</b></p>	<p>Effective ..... The Ontario Ministry of Environment cancelled the Smog Advisory that was initiated on .....</p> <p>Thank you for your assistance.</p>

**TABLE 3  
NOTIFICATION STYLES USED BY THE CITY OF TORONTO AND CITY OF  
HAMILTON**

TYPE OF NOTIFICATION PROCEDURE	DESCRIPTION				
<p><b>4. THE CITY OF TORONTO DIRECT NOTIFICATION STYLE</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p align="center"><b>Smog Watch/Alert Issued</b> MOE issues Smog Watch/Advisory via e-mail</p> </div> <p align="center">↓</p> <p><b>MOH Issues Corporate Smog Watch/Alert</b> Corporate Communications: - Issues broadcast fax/email - Faxes notification to divisional contact - Calls HPEPO staff on call</p> <p align="center">→</p> <p>Public Health (HPEPO) updates the Smog Alert Phone Line</p> <p align="center">↓</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p align="center"><b>Business Hours Resume</b> Divisional Response Plan in Effect</p> </div>	<ul style="list-style-type: none"> <li>• The notification process begins with the Ministry of Environment issuing a smog watch/alert notification via e-mail.</li> <li>• Corporate communications issues the appropriate message from the CAO or Medical Officer of Health (MOH) via broadcast fax, e-mail or voice mail to all City of Toronto employees and their Agencies, Boards and Commissions.</li> <li>• The City of Toronto also has the Toronto Public Health Smog Alert Phone Line, which operates between May and September. This phone line is updated Monday to Friday during regular business hours and provides staff and the public with information on smog in the City of Toronto.</li> </ul>				
<p><b>2. THE CITY OF HAMILTON FAN OUT NOTIFICATION STYLE</b></p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p align="center"><b>Ministry of the Environment</b> ——— <b>Air Quality Advisory</b> <b>Medical Officer of Health</b> ——— <b>Air Quality Alert</b></p> <p align="center"><b>Environmental Health Specialist</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px solid black; padding: 5px;"><b>Corporate Services</b></td> <td style="padding: 5px;"><b>Planning &amp; Public Works</b></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;"><b>Health Department</b></td> <td style="padding: 5px;"><b>Social &amp; Community Planning</b></td> </tr> </table> <p align="center"> <b>City of Burlington</b>  <b>Burlington Hydro</b>  <b>Conservation Halton</b>  <b>Town of Halton Hills</b>  <b>Halton Hills Hydro</b>  <b>Town of Milton</b>  <b>Milton Hydro</b>  <b>Town of Oakville</b>  <b>Halton Catholic Board</b> </p> </div>	<b>Corporate Services</b>	<b>Planning &amp; Public Works</b>	<b>Health Department</b>	<b>Social &amp; Community Planning</b>	<ul style="list-style-type: none"> <li>• The City of Hamilton uses a Fan Out notification procedure. Using this procedure means that the City of Hamilton doesn't have to register all City employees with the MOE.</li> <li>• Instead the MOE sends the Smog Alert notification to the individuals who have volunteered to be the key contacts for their department. Each department has two contact people, a main one and an alternate.</li> <li>• As soon as the volunteered contact receives the smog advisory e-mail from the MOE, plans are prepared for action. From then on each contact is required to monitor the AQI number on the MOE website.</li> <li>• Once the AQI reaches 50, each departmental plan is implemented.</li> </ul>
<b>Corporate Services</b>	<b>Planning &amp; Public Works</b>				
<b>Health Department</b>	<b>Social &amp; Community Planning</b>				

**TABLE 4  
EXAMPLES OF DIVISIONAL SMOG RESPONSE PLANS**

<b>City of Hamilton (Parks Departments Smog Response Plan)</b>	
<b>Department/Notification Procedure</b>	<b>Operational Actions Continued</b>
<p><b>Main Contact:</b> .....</p> <p><b>Alternate Contact:</b> .....</p> <p><b>Media Contact:</b> .....</p> <p><b>Communications Means:</b> E-mail, phone, two-way radio</p>	<ul style="list-style-type: none"> <li>• No vehicle idling</li> <li>• Investigate new technology</li> <li>• Double up in vehicles, where possible</li> <li>• Staff asked to take public transit or carpool, where possible</li> <li>• Request suppliers to postpone activities that contribute to fine particulate and ozone precursor emissions</li> <li>• Alert grass cutting contractors and any contractors performing work that generates smog of advisory to be included in future tender documents</li> <li>• Reduce to suspend all non-essential travel</li> <li>• Reduce co-operation of contractors to reduce equipment usage during advisories to be included in future tender documents</li> <li>• Suspend all use of non-essential gas-diesel powered tools and equipment during daytime, including golf courses.</li> </ul>
<p><b>Operational Actions</b></p> <ul style="list-style-type: none"> <li>• Suspend use of oil-based paints, solvents and cleaners, or substances that release fumes or vapours where possible</li> <li>• Restrict vehicle refueling between 10 am and 3 pm</li> <li>• Restrict grass cutting to scheduled times only and Sports Fields where safety is a concern</li> <li>• Suspend all leaf blowing and gas powered trimming between 1 pm and 3 pm</li> <li>• Where possible, postpone parks maintenance activities using gas-powered equipment and spraying pesticides</li> </ul>	
<b>City of Hamilton (Department of Roads/Operations/Maintenance Smog Response Plan)</b>	
<b>Department Notification Procedure</b>	<b>Operational Actions Continued</b>
<p><b>Main Contact:</b> .....</p> <p><b>Alternate Contact:</b> .....</p> <p><b>Media Contact:</b> .....</p> <p><b>Communications Means:</b> E-mail, Phone</p>	<ul style="list-style-type: none"> <li>• Restrict or eliminate fueling of vehicles/equipment other than in early morning</li> <li>• Reduce/eliminate the use of diesel powered vehicles</li> <li>• Schedule a minimum number of vehicles</li> <li>• Reduce/eliminate idling time of vehicles</li> <li>• Reduce heavy equipment operations (sweeping)</li> <li>• Reduce/suspend grinding operations</li> <li>• Restrict/reduce asphalt resurfacing</li> <li>• Notify contractors that their activities may be curtailed or suspended during smog days</li> <li>• Encourage staff to take public transit or carpool</li> </ul>

**TABLE 5  
EXAMPLES OF IDLING CAMPAIGNS**

<b>Region of Waterloo Idling Reduction Campaign</b>	<b>City of Mississauga “Towards an Idle Free Zone”</b>
<p>4. Citizens’ Advisory Committee Air Quality (CACAQ) (WR) launched an “Idling Reduction Education Campaign”.</p> <p>4. Purpose: Make people more aware of the health, environment and economic repercussions of idling.</p> <p>4. Intend to target different groups (municipal staff, school zones, work sites, businesses and other community sites) over the next 2-3 years.</p> <p>4. also adopted an Idling Reduction Policy, which prohibits idling of vehicles when not in use.</p> <p><b>* For more information look to Natural Resources Canada who has developed a web-based tool kit to assist municipalities and community groups across Canada*</b></p>	<p>4. Clean Air Committee wanted to see what they could do to decrease vehicle idling such as reducing “warm-up” idling to 30 seconds; turning your engine off if parked for more than 10 seconds; avoid using a remote car starter and spreading the word to family and friends.</p> <p>4. Mississauga created a pilot project year-long campaign to encourage residents to commit to turning off their vehicles when stopped for more than 10 seconds.</p> <p>4. Campaign includes:</p> <ul style="list-style-type: none"> <li>• <b>Baseline statistics:</b> To gage the behavior and opinions of Mississauga residents before the start of the campaign.</li> <li>• <b>Public Awareness:</b> includes newspaper advertisements; bus and shelter advertisements and radio advertisements; posters and metal signs posted throughout the City and Web Site at 123turnyourkey.com.</li> <li>• <b>GO Transit:</b> Media event at Mississauga GO station. U of T Mississauga students interacting with drivers in idling vehicles at 8 GO transit stations, handing out Anti-Idling information cards.</li> <li>• <b>City of Mississauga Workplace:</b> Supplying 5000 employees with Anti-Idling information cards and card decals; running an employee contest; raising awareness through internal communication vehicles including company Intranet and Newsletter.</li> <li>• <b>Private Sector Initiative:</b> To generate awareness of idling issues among Mississauga businesses and industries, and to enlist these business and industries to co-promote anti-idling messages to their employees, fleet drivers and customers. For example, City of Mississauga is partners with the Canadian Petroleum Products Institute (CPPI) on an Anti-Idling awareness building Initiative involving a media event, Anti-Idling “ambassadors” with drivers at over 50 gas stations in Mississauga. Also, Anti-Idling information kits were distributed to over 200 businesses and industries in Mississauga.</li> <li>• <b>School-Based Initiative:</b> Media event at Mississauga elementary school. Focus is on parents idling vehicles when picking up children after classes. U of T Mississauga students interacting with drivers in idling vehicles at schools (includes handing out Anti-Idling information cards and car decals).</li> <li>• <b>Other Municipal Hot Spots</b> (Community Centres, Arenas and libraries): U of T Mississauga students interacting with drivers in idling vehicles at a variety of locations throughout Mississauga and handing out Anti-Idling information cards and car decals.</li> </ul>

**Town of Markham  
Smog Strategies 2003  
Appendix A**

**Smog Alert Day  
Corporate Operations/Communications**

<b>Department Affected</b>	<b>Procedure</b>	<b>Considerations</b>
<b>Operations staff and management in all departments</b>	<p><b>Notification Procedure</b> E-mail Notification system for <b>smog watches, smog alerts</b> and <b>termination</b> notifications. MOE issues a smog watch/alert notification via e-mail to department heads/identified staff who are then responsible for notifying staff</p>	<p>4. <b>The Town of Markham must decide if they want every staff employee registered with the MOE or if we want key contacts in each department who then send out the e-mail to the rest of the staff.</b></p>
<b>Staff and management in all departments</b>	<p><b>Staff Smog Awareness Campaign</b></p> <ul style="list-style-type: none"> <li>• Staff Training: a designated staff member in each division/department will implement a training program to ensure that the Town's communications objectives are met.</li> <li>• Educational Component: will include presentations made to staff and councilors; information posters; fact sheets and newsletters about Markham's SARP; A Smog Reduction Week.</li> <li>• Intranet/Internet and E-mail Component: As part of the Town's website, develop an Internet and Intranet smog site. This also includes a message distributed by the Mayor and Council to City Staff on Smog Alert Days and prior to the Smog Season.</li> </ul>	<p>4. The town of Markham is committed to having its individual help outline the potential problems and concerns in implementing the plan and recommend solutions that work.</p> <p>4. Investigate the potential of the site including a copy of Markham's SARP; information about smog; it's impacts on health and the environment and actions that can be taken to reduce smog; a notice when the MOE issues a smog watch/advisory; links to important websites such as <a href="http://www.airqualityontario.com">www.airqualityontario.com</a>; a poll on what staff does to reduce smog and a feedback e-mail system.</p>

<p><b>Surrounding Community</b></p>	<p><b>Public Smog Awareness Campaign</b></p> <p><b>Increasing Community Awareness and Education</b> Activities include:</p> <ul style="list-style-type: none"> <li>• Inserts/articles in Markham newsletter</li> <li>• Media releases posted on Markham’s internet site</li> <li>• Letters/flyers sent home to parents from school</li> <li>• Participation in special events such as a Smog-A-Thon or Clean Air Commute</li> <li>• Presentations made to students in schools</li> <li>• “Facts About smog” brochure</li> <li>• Smog Information on the town’s Web Site</li> <li>• Development of a web survey asking people what they do to reduce smog</li> <li>• Development of an “Access Markham (Smog Info Line)” phone line.</li> </ul>	<p>4. Smog Reduction page on Town’s Website will include a copy of Markham’s SARP; information about smog; its impacts on health and the environment; an action plan that residents can refer to with respect to reducing smog; a notice when the MOE calls a Smog Advisory/Watch; important links such as <a href="http://www.airqualityontario.com">www.airqualityontario.com</a>; and a “contact us” section.</p> <p>- The Smog Information Line will include tips on how to reduce smog.</p>
<p><b>Smog Alert Day Community and Fire Services</b></p>		
<p><b>Corporate, Operations</b></p>	<p><b>Reduce/Suspend vehicle use:</b> Choose the cleanest possible commute by walking or biking, sharing a ride to work or using public transportation instead of your car.</p> <ul style="list-style-type: none"> <li>• Markham’s Rideshare Program</li> <li>• Providing showers and bicycle racks at the town of Markham’s Civic Center</li> <li>• Consider more flexible working hours so that employees can make the switch to using public transportation</li> <li>• Investigate alternative work arrangements (telecommuting and teleconferencing)</li> </ul>	<p>- Staff and public outreach, promotion and education are very important. Staff needs to be educated and informed on the alternative options available to them (for example, Markham’s Rideshare Program).</p>

<p><b>Corporate, Operations, Parks and Roads Division</b></p>	<p><b>Reduce/Minimize vehicle engine idling</b></p> <ul style="list-style-type: none"> <li>• Request to staff not to idle, who use vehicles as part of their duties</li> <li>• Investigate the potential for staff crews to be re-assigned to fewer vehicles to ensure necessary vehicles are at full passenger capacity</li> </ul>	<p>- Investigate the potential for an Anti-Idling Campaign (refer to Table 5)</p>
<p><b>City Staff (Maintenance and Facilities)</b></p>	<p><b>Reduce non-essential equipment use for energy reductions at Civic Center</b></p> <ul style="list-style-type: none"> <li>• Reduce lighting use</li> <li>• Reduce/minimize energy consumption through A/C system: set revised temperatures on air-conditioning units</li> <li>• Allow staff to dress more comfortably</li> </ul>	
<p><b>Corporate, Operations, Parks and Roads Division</b></p>	<p><b>Curtail activities requiring the use of oil-based paints, solvents and cleaners, and other products releasing volatile organic compounds (VOCs); examples may include signs and road paints.</b></p> <ul style="list-style-type: none"> <li>• Investigate the potential for moving road painting to night operations</li> <li>• Investigate the potential for alternatives such as picking up advertisements in the place of sign painting on smog alert days</li> </ul>	<p>4. There are two reasons for road line painting: to rehabilitate faded existing lines or to place new lines on rehabilitated pavement. The latter activity is much harder to reschedule since pavements must be marked as a part of road safety.</p>
<p><b>Corporate Operations. Parks and Roads Divisions</b></p>	<p><b>Reduce/suspend the use of gasoline or diesel powered equipment where possible (examples of machinery include lawnmowers, leaf blowers, trimmers and tractors)</b></p> <ul style="list-style-type: none"> <li>• Investigate the potential for alternative work arrangements and duties: For example make hand labour jobs a priority such as hand raking of ball diamonds, picnic areas; spreading woodchips; hand weeding of shrub/flower beds, playground sand, warning tracks; litter picking of natural areas/woodlots/creeks; removal of dead trees; filling turf/tree depressions, etc...</li> </ul>	<p>4. Consider the potential for parks staff to report 30 minutes earlier in the morning on smog alert days</p> <p>- Discuss the potential problems with delaying contractor work (cutting grass etc)</p>

<p><b>Corporate Operations, Parks Division</b></p>	<p><b>Suspend/Reduce pesticide/herbicide spraying between the hours of 9 or 10am and 3 pm</b></p>	<p>- In 2001, the Town approved a pesticide free pilot project for all parks in Ward 2 (Thornhill) and at the Markham Civic Center. Council approved that all Ward 2 parks continue to be pesticide free for 2002. Staff will be directed to use a non-selective herbicide on hard surface areas, paving stone areas and pathways at Markham civic Center.</p>
<p><b>Corporate Operations, Parks and Roads Divisions</b></p>	<p><b>Reschedule street sweeping to night operations or suspend/reduce street sweeping operations between the hours of 0 or 10am and 3 pm.</b></p>	<p>- Investigate the potential for flexible hours in contracts  - During Smog Alert Days, discretion should be exercised to eliminate the activity where practical. However, we must keep in mind the clean up related to safety (they should be assessed on an individual basis to determine if alternative cleanup procedures can be employed).</p>

## Appendix B

### Letter to Contractors/Suppliers

Date

Ladies/Gentleman

As part of Markham's Smog Response Plan, the Town of Markham is dedicated to notifying you of any smog warnings that may arise throughout the summer months.

Although this is a voluntary program we are committed to limiting emissions during these times of poor air quality due to ground level ozone. When a smog advisory is issued, the Town of Markham will notify you directly and would ask that you use your best discretion on your job sites.

Sincerely,

## Appendix C

### Town of Markham's Smog Response Plan: Post Smog Advisory Implementation Questionnaire

Date of Smog Alert Day:

Number of Days:

Name and Title:

Section/Department/Division:

1. Did you receive notification of the Smog Alert Day before? \_\_\_ YES \_\_\_ NO
2. If yes, what time of the day did you receive the Smog Alert \_\_\_\_\_
3. Did this give you enough time to implement all your department's Smog Plans? \_\_\_ YES \_\_\_ NO
4. Please place an X beside the actions you were able to implement:

Operational Actions	Entirely	Partially	Not at all	Not Applicable
Suspend use of oil-based paints and cleaners, or substances that release fumes or vapours where possible				
Restrict vehicle refueling between 10 am and 3 pm				
Restrict grass cutting to scheduled times only and Sports Fields where safety is concerned				
Suspend all leaf blowing and gas powered trimming between 1 pm and 3 pm				
Where possible, postpone parks maintenance activities using gas-powered equipment and spraying pesticides				
No vehicle idling				
Investigate new technology				
Double up in vehicles, where possible				
Staff asked to take public transit or carpool, where possible				
Request suppliers to postpone activities that contribute to fine particulate and ozone precursor emissions				
Alert grass cutting contractors and any contractors performing work that generates smog of advisory to be included in future tender documents				
Reduce to suspend all non-essential travel				
Request co-operation of contractors to reduce equipment usage during advisories to be included in future tender documents				
Suspend all use of non-essential gas-diesel powered tools and equipment during daytime, including golf courses				

**Appendix D**  
**The Number of Smog Advisories Issued, and the Total Number of Days**  
**Covered by the Smog Advisories, for Five of the Ontario Smog Advisory**  
**Regions for the Years 1993-2002**

<b>Region</b>		North Bay	Ottawa	Toronto	<b>York Region (Markham)</b>	Windsor
1993	Adv	0	0	1	1	1
	Days	0	0	1	1	1
1994	Adv	1	1	2	2	2
	Days	2	3	5	5	5
1995	Adv	2	2	5	4	6
	Days	4	3	10	8	13
1996	Adv	0	1	2	2	3
	Days	0	1	3	3	5
1997	Adv	1	2	2	2	3
	Days	1	2	5	4	5
1998	Adv	1	2	3	3	3
	Days	2	3	7	7	7
1999	Adv	2	3	5	5	5
	Days	2	4	9	9	9
2000	Adv	0	0	3	3	3
	Days	0	0	3	3	4
2001	Adv	7	6	7	7	7
	Days	17	14	20	20	23
2002	Adv	6	3	9	9	10
	Days	12	6	18	18	26