

## Towards an Idle-Free Zone

### Organization

City of Mississauga — Infrastructure and Environmental Planning, Transportation and Works Department

### Status

Started 2001, completed 2002 (some activities ongoing)

### Overview

The City of Mississauga's year-long pilot project encouraged motorists at a variety of locations to turn off their engines when parked. A combination of community-based social marketing techniques and a strong evaluation and monitoring process demonstrated reductions in the duration and frequency of engine idling in most site locations chosen for the campaign.

Total budget of \$130,500:

- Staff resources: \$50,000
- Production costs: \$30,500
- Evaluation: \$50,000 (provided by Natural Resources Canada)

Post-campaign survey results of 150 randomly selected households:

- 95% believe idling causes unnecessary air pollution (5%↑)
- 90% agreed that turning the engine off was the “right thing to do” (3%↑)
- 57% had heard the phrase “idle-free zone” (23%↑)
- 69% had read, seen, or heard of at least one campaign initiative

### Contact

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### Resources

- Campaign Web site ([www.123turnyourkey.com](http://www.123turnyourkey.com))
- Natural Resources Canada — Idle-Free Zone (<http://oee.nrcan.gc.ca/idling/home.cfm?Text=N>)

### Community context

One in every eight Canadian children suffers from asthma, caused in part by environmental factors such as exposure to air pollution.<sup>1</sup> Worldwide, up to three million people die each year as a result of exposure to air pollution.<sup>2</sup> In addition, the Ontario Ministry of Environment issued a total of 17 smog alert days in 2001-2002—mostly within the Greater Toronto Area (GTA).

As part of the GTA, the City of Mississauga chose to run this year-long educational campaign to reduce air pollution and to enhance its existing air quality activities (see Policy Context below).



*Most Ontario smog alerts are within the GTA*

### Policy context

The city's Air Quality Advisory Committee was formed in 1998 and includes members from all city departments, the Region of Peel Health Department, councillors, and the city's environmental coordinator. Its mandate is to recommend strategies to improve local air quality by reducing greenhouse gases (GHG) and smog-producing emissions, and to increase community support of environmentally sustainable measures.

The city joined Partners for Climate Protection (PCP) in 1999. PCP, managed by the Federation of Canadian Municipalities, is a framework that helps municipal

<sup>1</sup>[www.hc-sc.gc.ca/english/for\\_you/health4kids/body/asthma.htm](http://www.hc-sc.gc.ca/english/for_you/health4kids/body/asthma.htm)

<sup>2</sup>[www.who.int/inf-fs/cn/fact187.html](http://www.who.int/inf-fs/cn/fact187.html)

governments design and implement local action plans to reduce energy use and GHG emissions.

The city first prepared inventories of its energy use and GHG emissions and found that the transportation sector had the second highest emissions per capita (1.7 million tonnes).

The anti-idling campaign was incorporated into the city's local action plan, which includes other air quality actions:

- Notifying staff of smog alert days so that certain duties are carried out to decrease smog-producing emissions
- Annually expanding the Multiple Use Recreational Trail Network
- Implementing an innovative shuttle bus service for commuters
- Implementing a transit driver training program to improve fuel efficiency
- Testing its bus fleet for emissions.

## Rationale and objectives

During the 1990s Natural Resources Canada (NRCan) identified a series of actions that Canadians could take to reduce greenhouse gas emissions—one of these was to reduce the frequency and duration of engine idling.

In 2000 NRCan held a series of focus groups in several regions across the country to study the issue. The results helped NRCan develop a Web-based information kit that municipalities and community groups could use in anti-idling initiatives. To test the kit, NRCan approached the cities of Mississauga and Greater Sudbury to take part in a year-long pilot project.

Mississauga was chosen because of its plan to target city employees as well as motorists in and around public schools, which would connect the idling problem with children's health.

The city's specific objectives were to:

- Reduce unnecessary idling in the region
- Test the NRCan information kit.

## Actions and results

**Local customization of a national program.** NRCan recommended specific anti-idling initiatives and target audiences to the city, such as campaigns at schools, transit stations and businesses. In addition, since each community has unique features, the city worked with NRCan to develop a campaign to target drivers at municipal facilities, such as recreation centres and libraries. These initiatives were developed and presented for approval to the Air Quality Advisory Committee and the General Committee (which includes all city council members).

**Community-based social marketing approach.** NRCan prepared the information kit (graphics, messaging, etc.) using a community-based social marketing approach (CBSM), which the city adopted in all of its initiatives. CBSM emphasizes personal contact and vivid communications and messaging. The CBSM approach:

- Identifies barriers to an activity
- Designs strategies to overcome those barriers
- Pilots the strategies to evaluate their efficacy
- Implements the strategies on a broader scale



*Program signage, like the metal signs used in the city's campaign, prompts action by drivers*

**Learning from past programs.** The city studied the results of *Turn it Off*, an anti-idling program conducted in 2000 that used CBSM at schools and transit stations. It focused on three lessons revealed by that project:

- Motorists need to be reminded to turn their engine off when parked
- Personal contact is important
- Results improved when motorists were asked to make a commitment to avoid idling while parked for more than 10 seconds

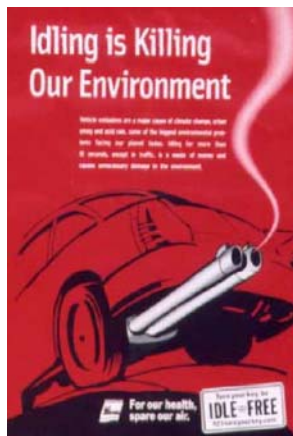
**Dividing the campaign to meet the target audiences.** The campaign was divided into seven key areas:

- Public awareness and media campaign
- Workplace
- Schools
- GO Transit
- Private sector
- Municipal facilities
- Pre- and post-campaign telephone surveys and interception interviews

There were several initiatives in the city’s campaign, and results are listed following the details of each.

**Public awareness and media campaign.** The campaign was launched at a media event in October 2001, with Mayor Hazel McCallion declaring the City of Mississauga an “Idle-Free Zone.” A communications strategy was developed for each campaign component and included:

- Media releases and events
- Newspaper and radio advertising
- Bus and bus shelter advertisements
- Posters and campaign information in community locations
- Dedicated external Web site
- Articles in employee newsletters on the city’s internal Web site



*Advertisement used in city bus shelters during the campaign*



*Artwork developed by NRCan that could be used by other communities in similar initiatives*

Results:

- Print and electronic coverage of the campaign reached 12 million readers, listeners, and viewers.
- Articles were published in the Toronto Star, Globe and Mail, Canadian Geographic Magazine, Canadian Living, Ottawa Citizen, and Mississauga News.
- Five local radio and television stations covered the media launches of the initiatives.

- The Web site received 10,000 visits, 62 requests for materials, and 176 comments. Of those who commented, 90% indicated support for the campaign.

**Workplace initiative.** Project staff distributed information cards and windshield decals to each city employee with their pay stub. They also asked city staff to display the decal, and a corporate-wide contest drew prizes for vehicles found displaying the decal.

Focus groups were held for each city department that managed fleets and fleet drivers to ask for their opinions about climate change and ideas to minimize engine idling. City divisions also developed new idling guidelines for drivers.



*The decal on top was used in most of the city’s initiatives*

*The bottom three decals are examples of artwork developed by NRCan that could be used by other communities in similar initiatives*

Results:

- Following the initiative, 96% of city staff were aware of the campaign, and 31% reported that the campaign had changed their idling behaviour.
- Windshield decals were affixed on most city-owned vehicles, and on 10% of personal staff vehicles.

- The divisions of Parks and Works developed and implemented guidelines or approaches to reduce idling among fleet drivers.
- Transit management revised its policy to reduce the maximum idling time for city buses from 15 minutes to 5 minutes.

**Schools initiative.** The schools initiative was launched with a media event. Information kits were distributed to 200 public and separate elementary schools in Mississauga, which consisted of:

- Anti-idling information cards and windshield decals
- Suggested activities and curriculum ideas
- Sample inserts for use in school newsletters

Curriculum ideas included how to incorporate anti-idling messages into math, science, health, arts, and language classes.

Schools in the two school boards outside of the Mississauga area received anti-idling kits from Greenest City's Active and Safe Routes to School program. The city partnered with Greenest City to allow these other schools access to similar anti-idling information that the city was circulating.

Lura Consulting collected baseline data (frequency and duration of idling vehicles) at 20 elementary schools. Metal signs (pictured above in Program Planning) were installed and bus management companies and bus drivers were asked to minimize idling during pick-ups and drop-offs.

Project staff approached almost 500 drivers at the 20 schools and provided them with an information card. They asked drivers to make a commitment to reduce the frequency and duration of engine idling by placing a decal on their vehicle's windshield.



*Decals used in this initiative featured a graphic of a child standing by an idling vehicle*

Results:

- 54% of drivers had been observed idling their vehicles.
- 90% of the drivers approached were willing to discuss the issues; 85% accepted the information card; 82% accepted the decal and 40% of these affixed it immediately.
- Project staff observed a decrease in the frequency of idling from 54% to 29%, and a decrease in the duration of idling from 8 to 3.5 minutes.

**GO Transit initiative.** Lura Consulting collected baseline data (frequency and duration of idling vehicles) at the eight GO Transit Stations located in the City of Mississauga. The GO Transit initiative was launched with a media event, and metal signs were installed at the passenger pick up areas of each station.

In the pick up locations of the stations, project staff asked drivers to make a commitment not to idle their engines using the information cards and windshield decals.



*GO Transit media launch event with Eldred King, Chair of GO Transit, Catherine Ray, NRCan, George Carlson, Mississauga Ward 6 Councillor, and GO Bear, the GO Transit mascot*

Results:

- 48% of drivers had been observed idling their vehicles.
- Of the 1,400 drivers approached, 92% were willing to discuss the issues; 91% accepted the anti-idling information card; 81% accepted the windshield decal and of these, 14% affixed it immediately.
- GO Transit installed 40 permanent anti-idling metal signs.
- Post-campaign observations found that the frequency of idling increased slightly (48% to 54%). Duration also increased an average of 20 seconds. Project staff believe that these increases were due to a drop in temperature and reduced daylight that occurred while conducting the campaign. The initiative may, however, have prevented greater idling increases as winter set in.



**Private sector initiative.** The city's anti-idling information packages were sent to over 200 area business and project staff followed up with some of the companies, particularly those dealing with automobiles (car washes, gas stations, etc.).

Results:

- Eight companies promoted the anti-idling message to their staff and the public during Earth Day 2002 events (AECL, Pratt & Whitney, AstraZeneca, Fuji Photo Film, Bentall Real Estate Services, Square One Mall, Dofasco in Hamilton, and Ford Motor Company in Oakville).
- Companies made requests for a total of 6,000 windshield decals and 7,700 information cards.

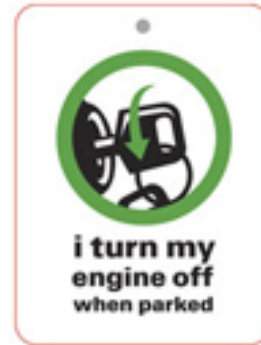
**CPPI initiative.** The Canadian Petroleum Products Institute (CPPI) launched its own campaign and began it with a media event (project staff from the city attended as invited guests). CPPI had initially communicated with NRCan directly because it wanted to begin a campaign immediately. NRCan put CPPI in touch with the city, but its initiative was run independently of the city's campaign.

CPPI refined the artwork developed by NRCan for its own use, and also used air fresheners in its campaign.



*CPPI's information card mimicked the theme of red and green traffic signals, with "turn it off" printed in red, and "ready to do you part?" printed in green*

At over 50 gas stations, CPPI staff asked drivers to make a commitment not to idle their engines using the information cards, air fresheners, and windshield decals. Additional promotional materials included anti-idling signs, banners, and sandwich boards.



*Promotional materials used by CPPI. Left to right: air freshener, banner, sandwich board.*

Results:

- Of the 11,000 motorists approached during the two-week campaign, 86% were willing to discuss the issues; 85% accepted the information card; 81% accepted the windshield decal, and of these, 20% affixed it immediately.
- 46% of motorists surveyed on the spot, indicated that the initiative would likely change their current idling behaviour.

**Municipal facilities initiative.** This initiative was conducted at 20 municipal facilities (libraries, arenas and community centres). Lura Consulting collected baseline data (frequency and duration of idling vehicles) at four of these locations. Information cards were distributed to all facilities and metal signs installed. Project staff obtained a commitment from drivers at the four locations.

Results:

- Of 250 drivers approached, 78% were willing to discuss the issues; 71% accepted anti-idling information; 64% accepted the windshield decal, and of these 34% affixed it immediately.
- Project staff observed that the frequency of idling increased (35% to 62%), while the duration decreased by an average of 27 seconds.
- Similar to the GO Transit initiative, project staff believed that lower temperatures and daylight were factors in the increased idling frequency, but that the campaign likely prevented greater increases in idling as winter set in.

**Pre- and post-campaign telephone surveys and intercept interviews.** A pre-campaign telephone survey with 150 was conducted in September 2001 to establish a benchmark. A post-campaign survey was also conducted with the same 150 people in October 2002 to measure the effectiveness of the awareness portion of the campaign.

Households were randomly selected from the city’s telephone directory and surveyors asked to speak with the household member who drove the most. Survey results of a sample this size are accurate with +/- 8.0 percentage points, 19 times out of 20.

Forty-three brief interception interviews were also conducted with drivers at the Kiss & Ride lanes of GO Transit stations in September 2001 to determine idling behaviour and which communication methods would be most effective.

Survey results:

Attitude/Question	Pre-campaign	Post-campaign
Idling causes unnecessary air pollution	90% agreed	95% agreed
Turning the engine off is the “right thing to do”	90% agreed	93% agreed
Heard of the phrase “idle-free zone”	34%	57%
In the <b>pre-campaign</b> survey, 1 in 3 residents reported idling at least once on the last day they drive, with an average idling time of between 3 and five minutes.		
In the <b>post-campaign</b> survey, 69% of respondents claimed to have read, seen or heard about at least one of the initiatives.		

Intercept interview results:

- 59% reported idling for climate control.
- Of those who turned their engines off when stopped, 31% did so for environmental reasons, 31% did so to save money and conserve fuel.
- 65% believed that idling was a problem.
- 27% suggested placing anti-idling signage at appropriate locations, while 24% suggested running an advertising campaign.
- Motorists exposed to at least one of the initiatives reported idling 3-4 times less frequently and had reduced their idling duration time from 4 minutes to 1 minute.

**Recognition.** The City of Mississauga was awarded the 2003 Silver Award plaque in the Climate Change—Community Awards category of the Canadian Environment Awards (CEA), a national program that recognizes community-based environmental initiatives.

## Participants

- Natural Resources Canada
- University of Toronto at Mississauga
- GO Transit
- Peel District School Board
- Dufferin-Peel Catholic District School Board

## Resources

**Budget.** Campaign development and implementation costs totaled \$80,500:

- \$50,000 for staff time. Project staff were provided free of charge through the intern environmental student program at the University of Toronto at Mississauga.
- \$30,500 for production costs for information materials, event expenses, contests and prizes, and other supplies.

NRCan developed all the graphics and messages for the information kit, so production costs were much lower than if the city had developed its own. NRCan’s materials were also produced electronically and the city adapted them by adding its corporate logo.

Based on the city’s population, campaign costs amount to \$0.13 per resident.

Campaign evaluation costs totaled \$50,000:

- Data collection for the GO Transit, municipal facilities and schools initiatives
- A pre- and post-campaign telephone survey of 150 people
- Preparing a final report

**Human resources.** Two city departments were involved: Transportation & Works and Corporate Services. Two staff members from Transportation and Works were dedicated to the anti-idling campaign:

- Senior project manager (part-time)
- Project coordinator (full-time, on average)

Corporate Services supplied a communications staff person to prepare media releases, organize media events, and maintain a report of media coverage.

Project staff also included four students from the environmental program at the University of Toronto at Mississauga. The students were provided free of charge under an intern program.

Volunteers included parents of children at the schools involved, and summer students hired by the Canadian Petroleum Products Institute.

**Champions.** City council and senior management provided strong support and helped launch the overall campaign as well as some of the individual initiatives (e.g., the workplace initiative).

Teachers used the information kit in their classrooms, and some parents assisted with the schools initiative.

Based on the city's mail out of 200 introductory information packages to businesses, companies provided anti-idling information to their customers. Cooksville Chrysler, for example, distributed information cards and windshield decals to their service customers for several months following the private sector initiative.

## Timeline

**Summer 2001.** City staff met with NRCan and Lura Consulting. Lura was the consulting firm contracted to collect baseline information throughout the campaign and to conduct two telephone surveys.

**September 2001.** Project staff trained. Baseline information collected for GO Transit initiative.

**October 2001.** Media launch of Public Awareness and Media Campaign. GO Transit and workplace initiatives conducted.

**Spring 2002.** Baseline information collected for schools initiative. Schools initiative conducted.

**August 2002.** Private sector initiative conducted.

**October 2002.** Baseline information collected for municipal facilities initiative. Municipal facilities initiative conducted.

## Challenges

**Idling myths need to be addressed.** "Warming up a vehicle engine, idling is good for the engine," and "shutting off and restarting an engine uses less gas than idling" are both myths encountered by project staff. These myths were addressed by providing drivers with research-based information, and then asking for a commitment to reduce the frequency and duration of engine idling. Prompts, such as the information card and decal, also reminded drivers not to idle unnecessarily.

**Weather and daylight can affect the effectiveness of a campaign.** Project staff found that the campaign was best conducted in late spring, early summer and early fall. Drivers were more willing to interact with staff when it was relatively warm and light outside. It was also safer for project staff to conduct their work during daylight hours, particularly during rush the evening rush hour.

**Time of day can affect a campaign.** In the municipal facilities initiative, project staff found that drivers were more receptive to the messages at the end of the day because drivers were feeling less rushed than during

morning hours. In the schools initiative, the end of the day was *the* critical time as parents waited to pick up their children.

**Some drivers are more receptive to the message than others.** Parents and caregivers in the schools initiative were more interested in the health and environmental messages of the campaign. These drivers were also considered a "captive" audience as they were waiting to pick up their children.

**Some drivers were hesitant to affix the decal.** A script was prepared in which project staff would offer to affix the decal on behalf of the driver. The number of decals taken and commitments made more than doubled once this approach was adopted.

## Lessons learned

**Set a good example.** The city launched its own workplace initiative concurrently with the GO Transit initiative and public awareness and media campaign.

**Effective communication materials are key.** NRCan's materials were colourful, had simple to understand messages, and were easily adapted for the city's use. The Web site was also a low-cost way to distribute the materials, and gave visitors an opportunity to ask questions or makes suggestions.

**Project staff must be well educated about all aspects of the campaign.** Project staff encountered many questions when asking drivers for a commitment to reduce idling frequency and duration. Project staff were able to answer questions relating to air quality, explain why the location was selected, and inform drivers that their comments would be passed onto appropriate city staff.

**Partnerships are a critical component.** The city partnered with GO Transit, two school boards, and the University of Toronto. These relationships helped project staff discuss the campaign with individual managers and staff at each site and made it easier to install signs and proceed with campaign activities. The collaboration between CPPI and the city also helped with overall awareness of the issues.

**Signs should be installed on the assumption that they are permanent.** Reflective signs were installed securely the first time according to the signs policies of the city, institutions, or company site involved, and were located in highly visible areas (the passenger pick up areas at GO Stations, for example, or near the entrances or exits of school driveways). In May 2002 city council passed an amended signage bylaw and the Planning and Building department approved the location of any campaign signs installed after that date.

**Male drivers responded more positively than female drivers.** In the telephone surveys men reported idling less

and held more negative attitudes towards idling, regardless of their exposure to the campaign. As often as possible, a male-female project staff pair was used so that male staff could approach male drivers, and vice-versa. This appeared to make female drivers more comfortable and more likely to speak with the staff about the issues.

## Next steps

Although the anti-idling initiative was a pilot project for a finite period of time, several actions are ongoing:

- Maintaining the Web site
- Responding to information requests (the city still receives requests from schools for metal signs, for example)
- Distributing promotional materials to city facilities and the private sector
- Providing advice to the GTA Clean Air Council
- Providing advice to other municipalities and communities when requested

In addition, the city has participated in the Greater Toronto Area-wide smog summits and will participate in the 5<sup>th</sup> Annual Smog Summit in June 2004.

Over the summer of 2003 the city partnered with the GTA Clean Air Council and NRCan to launch an idle-free campaign. The campaign was based on the results of this project, and was rolled out to all municipalities within the GTA.

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*Images are courtesy the City of Mississauga and  
Natural Resources Canada, except as noted*