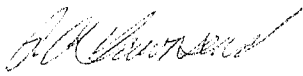




P.O. Box 1749
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Environment and Sustainability Committee
April 7, 2011

TO: Chair and Members of Environment and Sustainability Committee

SUBMITTED BY: 
Phillip Townsend, Director, Infrastructure and Asset Management

DATE: March 11, 2011

SUBJECT: Anti Idling By-Law

ORIGIN

Committee of Whole, February 1, 2011: Corporate Outcome Areas

RECOMMENDATION

It is recommended that The Environment and Sustainability Standing Committee:

1. Direct staff to prepare and present a recommended Anti Idling By-Law within business year 2011/2012; and
2. Direct staff to include the budgeting of educational and enforcement resources to accompany an Anti Idling By-Law for 2012/2013.

BACKGROUND

Within the Community Outcome Area - Clean and Healthy Environment - presented to Regional Council, an objective is to review opportunities to adopt an Anti Idling By-Law.

DISCUSSION

Halifax Regional Municipality (HRM) has a corporate Vehicle Anti Idling Policy (attachment one).

Currently, there are a couple of pieces of legislation that essentially prevent excessive idling in HRM:

- By-Law N 200: idling over 5 minutes is not allowed:
<http://www.halifax.ca/legislation/bylaws/hrm/documents/By-lawN-200.pdf>
- Motor Vehicle Act: You are not allowed to leave an unattended car running on the street.

With committee approval, staff would prepare a draft by-law for consideration that reflects best practices.

There are a lot of Canadian municipalities with Anti Idling By-Laws (including Toronto, Victoria, Mississauga, Ottawa, Hamilton and Kentville). A brief search shows there are probably between 50 and 100 municipalities with a By-Law in place. The Government of Canada, Natural Resources Canada, offers a model Idling Control By-Law as well (see attachment two).

A review of documentation would strongly suggest that to accompany an Anti Idling By-Law, resources for enforcement and education must be included and contemplated. Should the Committee approve this report, staff will return with the draft By-Law and resourcing requirements.

From staff's perspective, it appears that progress with the Union of Nova Scotia Municipalities (UNSM) Sustainable Practices Committee on an Anti Idling By-Law has a slower timeline than what staff interprets is the desire of the Committee.

Staff believes that we can prepare a By-Law for the Committee and Public Hearings this fiscal year, and if successful with resourcing, launch for April 1, 2012.

BUDGET IMPLICATIONS

Investigation of By-Law opportunities and preparation of a draft By-Law this fiscal year can be handled within existing Operating Budget envelopes.

Costs for education and enforcement would be articulated in the report providing a draft By-Law and if Council proceeds, would be brought forward in future budgets.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

There are a number of Anti Idling community projects that have happened in HRM, including Clean Nova Scotia, Ecology Action Centre and Children's Clean Air Network.

ALTERNATIVES

Committee may wish to not recommend reviewing an opportunity for an Anti Idling By-Law or waiting until UNSM projects unfold.

ATTACHMENTS

Attachment One: Corporate Vehicle Anti Idling Policy
Attachment Two: Cracking Down on Idling: A Primer for Canadian Municipalities on Developing and Enforcing Idling Control By-Laws

A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/cc.html> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Richard MacLellan, Manager, Sustainable Environment Management Office, 490-6056



Financial Approval by: Cathie O'Toole, CGA,MBA Director of Finance/CFO, 490-6308



**Halifax Regional Municipality
Vehicle Anti Idling Policy
August 2008**

Policy Intent

HRM is committed to becoming a healthy, sustainable and vibrant community. This includes an integrated systems approach to clean air, land, water and energy through a sustainable approach to the services and programs we deliver.

Vehicle emissions produce pollutants that contribute to climate change, smog and acid rain, some of the biggest environmental problems facing our planet today.

Reducing unnecessary idling has a positive effect on our air, land and water.

Policy Statement

The Halifax Regional Municipality has established a Vehicle Anti Idling Policy, which places limitations on engine idling. The policy applies to all vehicles used by HRM employees in the performance of their duties.

Definitions

Idling - means the engine is running while the vehicle is stationary or the piece of equipment is not performing work.

Vehicle - means any on road, or off road, self propelled vehicle that is required to be registered and have a licence plate issued by the Department of Motor vehicles

Equipment - means any self propelled/person operated equipment used in support of Municipal operations and services. (lawn mowers, bush cutters, boat engines, etc.)

Purpose

The purpose of the policy is to reduce the effect of HRM operations on our physical environment by:

- Reducing air pollution from vehicle and equipment exhaust
- Promoting energy conservation
- Reducing noise pollution
- Reducing wear and tear on HRM vehicles and equipment
- Reduce operational costs

Idling limitations

To ensure we approach vehicle idling in a consistent manner, all employees operating Municipal Vehicles and Equipment must adhere to the following idling limitations:

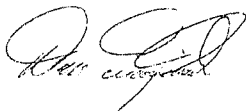
- Vehicles shall never be left idling when unattended
- Engine warm up periods will not exceed one (1) minute (provided air pressure for air brake systems are fully charged and all safety provisions are in place)
- Vehicles shall be shut down whenever idling periods are expected to exceed one (1) minute

* note HRM vehicles are not permitted to access "drive through services" as this too is unnecessary idling

Exceptions

As with all policies there will be some scenarios which are not conducive to the implementation of the limitations described above. Therefore, exceptions to this policy have been identified and only exists under the following circumstances:

- For vehicle maintenance and diagnosis purposes (to be kept to a minimum)
- Under extreme weather conditions or any other time when the health and safety of the employee or others may be jeopardized. To enable proper snow/ice clearing from vehicles.
- If the unit is not expected to be able to restart due to a mechanical problem. In this case, the vehicle is to be sent to Fleet Services for repair.
- Vehicles that need to be running to support operational requirements or while on an emergency scene
- Transit Vehicles in revenue service while carrying passengers.
- Engine is immediately required to power auxiliary equipment. (Hoist, lift platforms, hydraulic pumps, water pumps, etc.)
- This policy does not apply to typical stop and go traffic or when the unit is used for traffic control and is required to be running.



Dan English CAO

August 18, 2008

Date



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Canada

NRCan > OEE > Cracking Down on Idling: A Primer for Canadian Municipalities on Developing and Enforcing Idling Control By-laws

Communities and Government

Cracking Down on Idling: A Primer for Canadian Municipalities on Developing and Enforcing Idling Control By-laws

September 2005

Report prepared for

Natural Resources Canada and
The Greater Toronto Area Clean Air Council

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(See also Appendix A: Individuals Consulted for this Research)

CAP would like to thank Natural Resources Canada for its generous funding of this work, the members of Greater Toronto Area Clean Air Council for their financial support, as well as their time and thoughtful reflections on this material, and the Toronto Atmospheric Fund for its ongoing

financial support.

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Table of Contents

1 Introduction

2 Existing Idling Control By-laws in Canada

- 2.1 Stand Alone By-laws
- 2.2 Anti-idling Provisions in Noise and Other By-laws
- 2.3 Best Practices
- 2.4 Strategic Considerations
- 2.5 Summary

3 A Model Idling Control By-law

- 3.1 Weakness of Existing By-laws
- 3.2 Model Idling Control By-law Provision

4 Effective Enforcement for Idling Control By-laws

- 4.1 Why Enforce Idling Control By-laws?
- 4.2 Elements of an Effective Enforcement Strategy
- 4.3 Enforcement Planning and Implementation
- 4.4 Legal Action to Compel Compliance
- 4.5 Evaluating Enforcement Programs
- 4.6 Summary

5 Conclusions

Appendix A: Individuals Consulted for this Research

Appendix B: Tables Summarizing Key Features of Existing Idling Control By-laws

[Previous](#) | [Contents](#) | [Next](#)



NRCan > OEE > Cracking Down on Idling: Introduction

Communities and Government

1 Introduction

Canadians have become steadily more concerned about air pollution and climate change during the past decade. Highly visible polluters – including idling vehicles – have become the targets of citizen complaints. Many municipalities, especially in regions that suffer from frequent smog episodes, have adopted policies and programs to address these concerns. Among these initiatives are by-laws that target vehicle engine idling.

The first stand-alone idling control by-law was passed by the City of Toronto in 1996, although anti-idling provisions were previously written into noise, nuisance and parking by-laws of some municipalities. Since the Toronto by-law was passed, more than a dozen other Ontario municipalities have adopted idling control by-laws, and several more are in preparation. The Greater Vancouver Regional District has also prepared a model idling control by-law that is now under consideration by several municipalities in the Vancouver area.

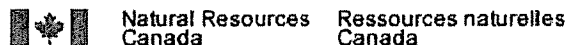
There is now enough experience with municipal idling control by-laws to evaluate existing by-laws, identify enforcement issues, and to recommend specific provisions and enforcement practices that could increase their impact. This report addresses these issues. It is written in three major sections. The first is an analysis and assessment of existing idling control by-laws in Canada. The second is a model idling control by-law, designed to build on the strengths and reduce the weaknesses of existing by-laws. The third section outlines issues related to the enforcement of idling control by-laws, and makes recommendations for more effective enforcement programs.

This report is the result of a collaborative effort among the Clean Air Partnership (CAP), Natural Resources Canada (NRCan) and the Greater Toronto Area Clean Air Council, with consulting services provided by Lura Consulting.

Information for the report was gathered in several ways:

- Review of extensive files collected by the Clean Air Partnership from previous idle-free initiatives;
- A survey of members of the Greater Toronto Area Clean Air Council (GTA-CAC), to determine if they had adopted, or were planning to adopt, idling control by-laws, and asking that copies of any such by-laws be forwarded to CAP;
- Consultations with Fleur Storce-Hogan of the City of Burlington and Kiran Ghai of the Region of Peel, on information they had already collected on idling control by-laws in Ontario, and with Shelina Sidi, on the development and application of a model by-law for the Greater Vancouver Regional District
- Internet searches to identify municipalities outside the GTA that have adopted idling control by-laws, and to download copies of the by-laws and related reports and commentaries;
- Examination of technical information available from Environment Canada and NRCan; and
- Interviews with representatives for all municipalities with by-laws, to get information on the development and application of the by-laws, enforcement practices and related education activities in their communities. Municipal contacts are listed in Appendix A.

[Previous](#) | [Contents](#) | [Next](#)



Canada

NRCan > OEE > Existing Idling Control By-laws in Canada

Communities and Government

2 Existing Idling Control By-laws in Canada

Various types of anti-idling provisions have been written into municipal by-laws for at least three decades. The City of Montreal passed an air quality by-law in 1970 that prohibited vehicles from idling more than four minutes if they were parked less than 60 metres from an opening of a building. The Town of Caledon first included anti-idling provisions in a noise by-law, in 1986. Several other municipalities included anti-idling provisions in noise by-laws in subsequent years. The intent of anti-idling provisions in noise by-laws is primarily to prevent disturbance from noisy vehicles idling in, or near, residential areas, rather than to reduce noxious air emissions. A few municipalities have developed anti-idling provisions in nuisance or parking by-laws as well.

The first stand-alone idling control by-law was passed by the City of Toronto in 1996, after several years of discussion and negotiation among City politicians, staff and the public. Most idling control by-laws that have since been passed are very similar to the Caledon or Toronto by-laws, though the newer by-laws contain many variations in the application and wording.

Currently, more than 20 Ontario municipalities have either stand-alone idling control by-laws, or anti-idling provisions in other by-laws. Approximately two-thirds of these by-laws have been passed recently. Our research found no municipalities outside Ontario that have stand-alone by-laws, though many have anti-idling provisions in other by-laws and have mounted effective idle-free campaigns or do substantial work on outreach and education in their communities. In 2004, the Greater Vancouver Regional District finalized a model idling control by-law and recommended its adoption by municipalities in the Greater Vancouver area. At the time of writing, the City of Vancouver is considering adoption of this model by-law.¹

Fourteen municipalities in southern Ontario now have idling control by-laws, including six in the Greater Toronto Area. At least eight other municipalities – including Markham, Newmarket, Oshawa, the City of North Vancouver, Vancouver, Welland and Whitby – have plans to pass stand-alone by-laws in the near future. At least 12 communities in Ontario and B.C. have anti-idling provisions in other by-laws. Individual citizens and local environmental organizations have encouraged several other municipalities to consider and implement such by-laws.

Some municipal councils – including Brampton, Whitehorse, Burnaby and New Westminster – have considered passing idling control by-laws, but decided against a regulatory approach largely on the grounds that the by-laws are difficult to enforce.

¹This by-law is also similar to the Toronto by-law, though it has eliminated several exemptions contained in the Toronto law.

2.1 Stand-alone By-laws

2.1.1 Municipalities with Stand-alone By-laws

At the time of writing, 15 municipalities, all of them in Ontario, have passed stand-alone idling control by-laws. These include: Burlington, Guelph, Huntsville, Kingston, London, Markham, Niagara Falls, Oakville, Pickering, Stratford, Toronto, Vaughan, Whitchurch/Stouffville, Windsor and Woodstock.

2.1.2 Features of Existing Stand-alone By-laws

Typically, stand-alone by-laws contain the following:

- **Legal basis** of the by-law. Each province and territory has enabling legislation that grants authority to municipalities to regulate with respect to nuisances, health, safety and well being of the inhabitants of a community, and this legislation is cited in the by-law.
- **Rationale** for the by-law, usually setting out concerns about air pollution from vehicle emissions and their adverse health effects. Recently, some jurisdictions have added to the rationale the goal of reducing greenhouse gas emissions.
- **Definitions** of terms such as idling, layover, mobile workshop, stopover, transit vehicle, vehicle, and others.
- **General provisions** of the by-law, that set out the time beyond which vehicles are not allowed to idle. Typically, municipalities set a 3- or 5-minute limit. Some municipalities also specify areas of the community where idling is prohibited – usually residential areas. Three municipalities – Kingston, Toronto and Windsor – prohibit the idling of boats as well as motor vehicles.
- **Exemptions** from the by-law. Most recent by-laws have a large number of exemptions from the prohibition against idling. The following are typically exempted from the idling provisions, except where idling is "substantially for the convenience of the operator:"
 - Fire, police and medical service vehicles
 - Vehicles participating in emergency activity
 - Vehicles stuck in traffic
 - Hot (+27°C) or cold (-5°C) weather conditions
 - Passengers with a medical letter certifying their need for controlled temperature or humidity
 - Mobile workshops with equipment powered by the motor, during the course of their work
 - Where idling is necessary for maintenance or repair of the vehicle
 - Transit vehicles while passengers are embarking or disembarking
 - Transit vehicles at a layover or stopover with passengers on board
 - Vehicles in a parade or other event authorized by the community
 - Armoured vehicles.
- **Administrative and Enforcement Provisions.** This section indicates that a person who contravenes the by-law is guilty of an offence and is liable to a penalty as provided for in the relevant enabling provincial legislation. Although many existing by-laws do not specify the enforcement agency, some by-laws include a clause that identifies the agency or agencies responsible for enforcement, for example:
 - By-law enforcement
 - Parking enforcement
 - Police
 - Public Health inspectorate (the City of London is the only municipality that has allocated enforcement responsibility to its public health department).

Most of the existing by-laws don't specify a set fine for contravening the by-law, although about half the municipalities with stand-alone by-laws do have set fines. To date, set fines vary from a low of \$100 to a high of \$380. For those jurisdictions without a set fine, the offender must attend a court hearing, where the maximum fine for conviction may be much higher. These provisions vary from province to province (and any municipal legal department would be able to cite the relevant regulations). The Ontario provisions for applying a set fine or issuing a summons – which govern all the existing stand-alone idling control by-laws – are outlined in the sidebar on the next page.

- **Enactment.** This sets out the date when the by-law comes into force. Most municipalities

enact the by-law on the date it passes, but a few have delayed the date it comes into force in order to inform and educate the public first.

Table 1 in Appendix B provides a summary of the key features of 14 stand-alone idling control by-laws in the Province of Ontario and the model by-law proposed by the GVRD.

Idling control By-laws and the Ontario Provincial Offences Act

Ontario municipalities that enact an idling control by-law, can enforce it under the terms set out by Part 1 and Part 3 of the Provincial Offences Act.

Part 1 of the Provincial Offences Act, "Commencement of Proceedings by Certificate of Offence," allows a provincial offences officer to issue a ticket certifying that an offence has been committed, and indicating the set fine for the offence, or to issue a summons. Only about half of municipalities with idling control by-laws have applied to the Attorney General for a set fine. A ticket with a set fine allows the offender to pay by mail, simplifies the enforcement process, and reduces the costs associated with administrative proceedings. To date, the set fines vary from a low of \$100 to a high of \$380. For those jurisdictions without a set fine, a summons is served and the offender must attend a court hearing, where the fine for conviction may be up to \$500. A Part 1 certificate of offence must be served on the person charged.

Part 2 of the Act, "Commencement of Proceedings for Parking Infractions," allows for ticketing a vehicle, rather than the offending driver. This allows enforcement officers to leave a ticket on the windshield, rather than wait for the driver to appear. Several enforcement officers consulted during this research suggested that Part 2 of the Act should be enlarged to include vehicle idling offences, to make enforcement easier. However, Part 2 cannot currently be applied in the enforcement of idling control by-laws.

Part 3 of the Act, "Commencement of Proceedings by Information," allows Ontario municipalities to make a complaint to a Justice of the Peace on the basis of information from witnesses (including enf



NRCan > OEE > 3 A Model Idling Control By-law

Communities and Government

3 A Model Idling Control By-law

The goal of this section is to provide an effective model by-law that municipalities can use to curb idling in their communities.⁸ The model by-law was derived from research that included:

- Collection and analysis of existing idling control by-laws in Canada;
- Interviews with municipal staff responsible for developing, communicating and enforcing these by-laws; and
- Review of relevant technical and regulatory support documentation.

An effective law or by-law is designed to be enforceable. Enforceable by-laws have several features:

- A clearly stated purpose;
- Straightforward and practical requirements;
- Consistency with the provisions of other by-laws;
- Penalties that are unambiguous, appropriate to the level of harm associated with the activity and significant enough to deter non-compliance;
- A designated enforcement authority with the ability to enforce the by-law.⁹

Assessed by these criteria, the existing Canadian idling control by-laws have both strengths and weaknesses. Most of the idling control by-laws have a clear purpose, though practical considerations have resulted in a number of exemptions. Most of the by-laws have identified a clear enforcement authority. However, only half have set fines that are relatively easy to administer. The following provides a more detailed overview of the weaknesses and strengths of existing by-laws.

⁸An anti-idling by-law is one of a suite of measures that a municipality can take to reduce Idling. Other important measures include anti-idling fleet policies, the creation of idle-free zones with appropriate signage, education and community-based social marketing programs.

⁹In addition to writing and passing a well-designed law, municipalities need to allocate resources to enforcement, and have a clear enforcement strategy and procedures. They also need to communicate to their constituents the reason for and the requirements of the law. Ideally, the impact of the by-law and enforcement activities on polluting behaviour should be evaluated periodically. These issues are dealt with in more depth in Section 4.

3.1 Weakness of Existing By-laws

Several weaknesses in the provisions of existing by-laws make enforcement difficult, time-consuming or costly. These include:

- Lengthy allowable Idling period;
- Allowed idling times for transit vehicles on layover or stopover;
- Large number of exemptions;

- Temperature exemptions;
- Medical exemptions; and
- Absence of a set fine.

3.1.1 Lengthy Allowable Idling Period

Canadian by-laws currently allow vehicles to idle anywhere from three to – in one case – 10 minutes. Enforcement staff in several municipalities have expressed concern about the length of the allowable idling period, because the longer a by-law enforcement officer must wait and observe an idling vehicle, the more time-consuming and costly the enforcement. A reduced allowable idling period would make idling control by-laws easier to enforce.

A reduced idling period would also meet the intent of many by-laws to reduce greenhouse gas emissions. A light-duty car with a warm engine that idles for more than 10 seconds burns more fuel and emits more greenhouse gases than shutting down the engine and starting it again. As a result, a number of municipal and corporate fleets have imposed 10-second limits on idling of fleet vehicles to conserve fuel and reduce greenhouse gas emissions. Many municipalities also promote a 10-second limit in vehicle engine idling literature and idle-free education programs. Shorter allowable idling times in idling control by-laws would be consistent with these environmental policies.

The health grounds for minimizing the allowable idling period, however, are less straightforward. Factors such as the age of the vehicle, the type of engine (diesel or gasoline), the catalytic converter and the outside temperature can all affect air pollution emissions from idling and determine when it is less polluting to idle a vehicle or to shut down the motor and start up again later.

In general, it is more polluting to idle a vehicle to warm up the engine than to start driving after about 30 seconds from a cold start. Vehicle engines warm up fastest when a vehicle is being driven, so as long as the windshields are clear, there is little reason to idle on start-up. Use of a block heater in very cold weather warms the engine before starting and reduces pollution even more.

Catalytic converters – which reduce carbon monoxide and hydrocarbon emissions – work best when warmed up. As a result, some commentators suggest that vehicle idling will produce fewer pollutants than shutting down the engine and starting up a little later. However, idling vehicles circulate coolant that in warmer weather may cool the engine and catalytic converter faster than turning it off. And studies show that in cold weather, a gasoline engine that is shut off for a short period (under 10 minutes) does not cool down enough to reduce the effectiveness of the catalytic converter. However, in extreme cold a vehicle shut down for a longer period (over 30 minutes) would have increased pollutant emissions when it is restarted.

Unlike gasoline-powered vehicles, most diesel vehicles need a few minutes to warm up the engine at the start of a shift. Diesel vehicles can use a variety of anti-idling devices to reduce the need for idling to warm up the engine, cool the vehicle or run auxiliary equipment when stopped, however.¹⁰

All this makes it more difficult to specify an optimum idling cut-off time for all vehicles on the basis of pollutant emissions. When a municipality chooses an allowable idling period, it must balance these issues of enforceability, climate change, pollutant emissions and health concerns.

¹⁰For a description of some of these options see A Model Idling Control Program for Municipal Fleets on the CAP website at www.cleanairpartnership.org/gtacac.

3.1.2 Extended Idling for Transit Vehicles

Most existing anti-idling by-laws allow transit vehicles to idle for 10 or even 15 minutes on layover or stopover, except where idling is substantially for the convenience of the operator. This is usually justified on the grounds of providing a comfortable environment for passengers. However, a 10- or 15-minute allowable idling period makes enforcement problematic.

Transit vehicles are of particular concern because diesel vehicles – especially those with older or poorly maintained engines – are particularly dirty when idling, emitting particulates as well as greenhouse gases and other pollutants. Emissions from idling buses can become problematic in bus terminals or other partially enclosed areas.

In response to this concern, the Greater Vancouver Regional District in 2004 proposed a model by-law that allows transit vehicles to idle longer than 3 minutes only when passengers are embarking or disembarking. No municipality has adopted this provision to date.

3.1.3 Large Numbers of Exemptions

Most of the existing by-laws have between 10 and 12 exemptions that allow vehicles to idle beyond the prescribed 3- or 5-minute limits. While most of the exemptions are reasonable when examined individually, the effect of having a large number of exemptions is to create a patchwork law that is unevenly applied to some vehicles in some circumstances. Some enforcement officers report that this frustrates citizens who call to lay a complaint about idling vehicles in their communities, only to discover that the vehicles are exempted from the provisions of the by-law for one reason or another.

Municipalities that wish to make their by-laws more credible and enforceable should consider reducing the number of exemptions. A number of vehicles – such as police, fire, ambulance, vehicles attending an emergency (tow trucks), mobile workshops, and others – are currently exempted because of the need to power warning lights, computers, refrigeration, air conditioning, heating, and other devices. However, auxiliary power units are now available to provide power for many of these functions, and use much less fuel than an idling vehicle engine. There are also new technologies – such as LED (light-emitting diode) lights – that require much less power, enabling them to be run from the battery rather than an idling engine.

3.1.4 Temperature Exemptions

Most of the existing anti-idling by-laws exempt vehicles from idling prohibitions when temperatures are higher than 27°C or lower than 5°C, so that drivers can operate air conditioners or heaters to maintain passenger comfort in the vehicle. Three municipalities exempt vehicles whose interior temperature is greater than 27°C or less than 5°C. The justification for this is that a vehicle standing in a sunny location might get quite hot inside even though the outside temperature is cooler. However, most municipalities that have adopted this exemption, have applied it to the outside temperature rather than the temperature on the interior of the vehicle. This is because by-law enforcement officers do not have the right to enter a vehicle to check the temperature, which makes the provision difficult to enforce.

Both the inside and outside temperature exemptions allow for unlimited idling for a large part of the year in much of Canada. Perhaps even more problematic, allowing vehicles to idle when the temperature is above 27°C means that unlimited idling is permitted on most smog days.

Recognizing these enforcement problems, the Greater Vancouver Regional District did not include a temperature exemption in its model by-law published last year.¹¹ GVRD representatives acknowledge that weather conditions in this area are moderate, which makes temperature

exemptions less of a concern. Still, other municipalities would be wise to consider the problems that the temperature exemption raises for enforcement.

The temperatures of 27°C and 5°C were proposed during the development of the Toronto by-law, to allow vehicles to have air conditioners or heaters operating when temperatures outside are high or low. Temperature is only one of the factors that determine comfort or health effects related to weather conditions. Other factors include: clothing, air movement, cloud cover, and humidity. Ideally, an exemption aimed at the comfort and safety of idling drivers and their passengers would take into account several of these factors. Practically, it is not possible.

Canada's Humidex rating system combines two important factors – temperature and humidity.¹² When the temperature gets into the mid 20's, high relative humidity can raise the Humidex above 30°C. Sedentary people such as drivers and passengers in stationary vehicles, will start to experience some discomfort at a Humidex level of 30-39°C, and feel much more uncomfortable at a rating of 40°C and higher. Heat stress will generally not occur in sedentary persons until Humidex readings reach 46°C. The lowest temperature at which this can occur is 29°C (with a relative humidity of 100 %).

Using this information, municipalities would be justified in using a temperature exemption of 29°C or 30°C to safeguard the health of people in stationary vehicles against heat stress.¹³

Several U.S. states and municipalities allow idling only if the outside temperature is lower than 32° F. This would translate to a temperature exemption of 0°C if it were applied in Canadian jurisdictions.

The Town of Markham's recent idling by-law (June 2005) is the first to allow exemptions when the temperature is above 30°C or below 0°C.

¹¹The City of Guelph does not have a temperature exemption either, but it allows vehicles to idle for 10 minutes.

¹²If the hour-to-hour Humidex rating were readily available to enforcement officers, it would be a better index to include in an exemption intended to safeguard the health of drivers and passengers in stationary vehicles.

¹³Of course, people in stationary vehicles usually have the option to leave a vehicle and go to a more comfortable location, or in some instances, simply to roll down the windows.

3.1.5 Exemption for Persons with a Medical Certificate

Existing anti-idling by-laws include an exemption for vehicles transporting a person where a medical doctor certifies in writing that the person needs the temperature or humidity be maintained within a certain range. There is no evidence that in the nine years since this exemption was first enacted in the City of Toronto by-law, and in similar by-laws passed later, that anyone has acquired or used such a letter to allow them to idle their vehicle. The Greater Vancouver Regional District did not include this exemption in their model by-law.

3.1.6 Lack of a Set Fine

By-laws with set fines are easier to enforce. An enforcement officer can write a ticket for an idling infraction, and the offending driver in most cases simply pays the fine in the same way they would a parking ticket, with the option to go to court if they wish to contest the charge. Since relatively few drivers contest the charge, the enforcement officer needs only the time required to observe the idling vehicle for a little longer than the 3 or 5 minutes allowed by the by-law, and to write the

ticket, with an occasional appearance in court. In municipalities with a set fine, enforcing an anti-idling by-law could produce revenue that supports by-law enforcement. However, fewer than half of municipalities with anti-idling by-laws have set fines.

In municipalities without a set fine, an enforcement officer must write a summons, prepare a charge and then appear in court, which can take an estimated 4-5 hours for each charge, and takes up the time of court officers as well as the enforcement officer. This can be a revenue drain on a municipality. It may also discourage enforcement officers – who may have the responsibility to enforce many by-laws – from enforcing an anti-idling by-law because of the time requirements.

3.2 Model Anti-idling By-law Provisions

The model anti-idling by-law proposed on the following pages outlines the key provisions that municipalities might consider in adopting a new by-law or revising an existing one. It draws on the strengths of existing by-laws, and attempts to address some of the weaknesses identified by municipal enforcement officials. In some cases, the model by-law suggests different options that municipalities might want to consider for specific provisions.

To help municipalities in considering the provisions of a new or revised by-law, the model is first presented in a chart form, with comments on specific provisions in a column on the right. The proposed by-law is also presented as a stand-alone document in Section 3.3.

<u>Provisions of a Model Anti-idling By-law</u>	<u>Comments</u>
<p>Preamble</p> <p>Whereas Section [] of the [<i>relevant provincial act</i>] authorizes municipalities to regulate with respect to [fill in the relevant wording from</p>	



NRCan > OEE > Effective Enforcement for Idling Control By-laws

Communities and Government

4 Effective Enforcement for Idling Control By-laws

Many Canadian municipalities have recently passed idling control by-laws to reduce local air pollution and greenhouse gas emissions. Many more municipalities are actively considering adoption of idling control by-laws. Some municipal councils have considered and then rejected idling control by-laws, on the grounds that they are too difficult to enforce.¹⁵ The Clean Air Partnership has consulted with municipalities that have idling control by-laws to discuss the provisions of their by-laws and associated enforcement issues.

Most municipalities with by-laws have taken a limited approach to enforcement. Typically, communities do some public outreach and education on the issue of vehicle idling prior to passing the by-law as well as afterwards. Enforcement has mainly involved reacting to complaints from the public by speaking to offenders, providing information on the by-law and the reasons for it, and asking for voluntary compliance. Few communities issue tickets and summonses, and those that do usually limit this activity to short sporadic campaigns rather than undertaking ongoing enforcement.

Several factors have contributed to this limited approach to enforcement.

- Many municipalities purposely use the by-law as an education tool, and have explicitly rejected the use of penalties to achieve compliance.
- Many municipal by-laws are enforced on a complaints basis, so responding to idling infractions in the same way is the norm.
- Municipal budgets are tight, and by-law enforcement departments may not have sufficient resources to take a more pro-active approach.
- Other by-laws have enforcement priority because they are revenue generators (e.g. parking) or because they have a more immediate impact on public health and safety (e.g. animal control, construction site access, swimming pool fencing, etc.).

4.1 Why Enforce Idling Control By-laws?

There is a growing consensus today among policy researchers and practitioners that both voluntary and regulatory tools are necessary to effectively tackle environmental issues.¹⁶

Education is essential to build public understanding of and support for environmental programs, as well as to attain voluntary compliance with environmental goals and laws by a significant portion of the population. Educational programs and community based social marketing have been important elements of the effort to reduce idling in Canada and have raised awareness of the economic and environmental costs of idling. In communities with idling control by-laws, education and information programs have made many people aware of the existence and requirements of the law.

Passing environmental laws and regulations engages the media and raises the profile of environmental issues to a level that is difficult to achieve by information and education programs alone. Implementing a by-law also demonstrates the commitment of government to change damaging environmental behaviours, and impose an obligation on the regulated community to make these changes happen. However, laws that are not seen to be enforced:

- Lose the power to affect changes in behaviour;
- Frustrate citizens who wish to see action on environmental issues; and
- Damage the credibility of the government that passed them.

Every government has limited resources for enforcement. Nevertheless, enforcement actions can have significant impact if they are well planned and publicized. The International Network of Environmental Compliance and Enforcement identifies several important benefits to enforcing environmental laws. Enforcement:

- Protects the environment and public health;
- Strengthens the credibility of the government which passed the law by demonstrating the commitment to back it up;
- Encourages compliance by those who otherwise fail to take the law seriously;
- Ensures fairness towards those who voluntarily comply; and
- Reduces economic and environmental costs associated with the unregulated activity.¹⁷

These benefits hold true for idling control by-laws as well as other environmental and public health laws.

4.2 Elements of an Effective Enforcement Strategy

Enforcement is a set of actions that governments or others take to achieve compliance with a law or by-law. An effective enforcement program should have the following elements:

- A clear and enforceable law;
- Resources to administer and implement the law;
- Appropriate penalties; and
- An enforcement plan.

4.2.1 A Clear Law with Enforceable Provisions

Idling by-laws govern a relatively simple environmental problem – the unnecessary idling of vehicles and the noxious emissions that result. The more simple and straightforward the by-law, the easier it is for the public to understand, and the easier it is to enforce. As discussed in Sections 2 and 3, existing idling control by-laws have a number of provisions that make them difficult to enforce. Municipalities planning to pass new idling control by-laws should consider making them more enforceable by reducing the allowable idling times, reducing the number of exemptions and eliminating or reducing the scope of the temperature exemption.

4.2.2 An Enforcement Agency with the Resources to Administer and Implement the By-law

When weighing options about where to assign the responsibility for enforcing idling control by-laws, municipalities should take into account:

- Related and competing responsibilities of the possible departments;
- Staffing resources; and
- Training requirements.

Municipalities tend to allocate the responsibility to administer and enforce idling control by-laws to general by-law enforcement departments. Some municipalities assign the task to parking enforcement officers. One municipality has assigned responsibility to its public health department. In all municipalities, police may also enforce the by-law, though in practice, few do.

Smaller municipalities have fewer options, however, municipalities with a separate parking enforcement office or agency should seriously consider assigning responsibility for idling control by-law enforcement to this department. Parking enforcement officers are an appropriate group to enforce idling control by-laws because:

- There are comparatively large numbers of parking enforcement officers and they have fewer competing responsibilities than general by-law enforcement staff;¹⁸
- Parking enforcement departments often have a more pro-active enforcement mandate than general by-law enforcement personnel;
- Parking enforcement officers are usually on the streets looking for infractions (whereas other by-law enforcement typically depends on complaints or permitting systems to alert them to a potential concern or violation); and
- Many idling infractions occur in areas where parking officers regularly patrol, and they are more likely to spot and be able to respond to these misdemeanours.

It is more challenging for general by-law enforcement officers to take a pro-active role in enforcing idling control by-laws. General by-law enforcement officers have a broad range of by-laws for which they are responsible, some of which have more immediate health and safety consequences than idling, and so have a higher priority. As previously mentioned, by-law enforcement is largely done on a reactive basis, responding to complaints and permit applications. And many by-law enforcement departments are short-staffed compared to parking enforcement operations.

Like the general population, enforcement officers may not consider idling particularly problematic, or may be unable to explain or defend the law to the public. Therefore, in addition to training enforcement officers in the particulars of a proposed or adopted idling control by-law, municipalities should ensure that they understand and can articulate the rationale for the law.

4.2.3 Appropriate Penalties that can be Applied without Disproportionate Effort

Any municipal by-law may be enforced by a summons that notifies a person that he or she has committed an infraction, and orders them to appear in court for a hearing on the issue. This procedure is appropriate for most municipal by-laws. However, municipalities that have or are planning to adopt idling control by-laws should consider establishing a set fine, which makes enforcement easier, less time-consuming, less costly and less of a burden on the courts. A set fine allows the enforcement officer to take a few minutes to write a ticket, which an offender most often will choose to pay by mail – although they will always have the option to contest the ticket in court. By contrast, issuing a summons and appearing in court may take several hours of an enforcement officer's time, will also take up the time of other court officers, and further crowd already packed court dockets.

In establishing a set fine, municipalities must also consider a penalty that is perceived as "fair" in relation to the damage inflicted on the environment and public health. Currently, most set fines for idling range between \$100 and \$155. These are considered significant penalties and strong deterrents. However, at least two Canadian municipalities planning to pass idling control by-laws in the near future are considering fines in the \$40 range.¹⁹ Officials for these municipalities argue that smaller fines still have a deterrent effect, but are less likely to be regarded as grossly unfair, and therefore be contested in court. Also, enforcement officers may be more reluctant to write a ticket for larger fines, either because the fine appears unreasonable or because offending drivers are more likely to react forcefully when given a ticket for \$100 or more.

4.2.4 An Enforcement Plan

No matter how well funded, no municipality ever has enough resources to enforce by-laws everywhere. Thoughtful enforcement planning can ensure that enforcement resources are used to

the best effect.

Enforcement planning for an idling control by-law should incorporate the following activities:

- Identification of areas where idling compliance may be a problem so that education and enforcement efforts are appropriately targeted;
- Compliance promotion activities, including:
 - Information and education on the rationale for, and requirements of, the law;
 - Posting of signs to inform the public about the law and encourage voluntary compliance, especially in idling "hotspots";
 - Social marketing to encourage the commitment of individuals not to idle;
 - Warnings issued to individuals or firms whose vehicles are found idling;
- Enforcement and legal action to compel compliance and impose penalties for violating the law. Approaches may include:
 - Complaints-based enforcement;
 - Pro-active blitzes of hotspots (usually connected to idling control campaigns);
 - On-going proactive enforcement;
 - Some combination of the above;
- Monitoring and periodic evaluation of enforcement activities and their impact on vehicle idling.

These aspects of enforcement planning are developed in more depth in Section 4.3.

4.3 Enforcement Planning and Implementation

Effective enforcement planning and implementation involves both identification of idling hotspots and compliance promotion.

4.3.1 Identification of "Idling Hotspots"

Identifying areas where idling is a common problem is an important first step in enforcement planning. Municipal staff and councillors will be able to quickly identify many of these due to frequent complaints by the public. Typically, these "idling hotspots" include:

- Schools
- Childcare centres
- Recreation centres
- Libraries
- Transportation hubs

- Mall entrances
- Entertainment venues
- Tourist sites
- Fast food drive-ins
- Car washes.²⁰

Listing these hotspots - and adding to the list when new complaints come in - is an important first step in targeting areas for evaluating the extent of the problem, doing education, erecting signs, giving out warnings and then applying legal penalties. Enforcement agencies may not want to limit all their activities to these sites, but concentrating efforts in known areas of concern is a good use of limited enforcement resources.

4.3.2 Compliance Promotion

Enforcement is widely regarded as more effective when undertaken together with promotion activities.²¹

Compliance promotion builds public knowledge of and support for a by-law. It provides the rationale for the by-law, explains the requirements and encourages people to comply voluntarily. Compliance promotion may involve the following activities:

i) Education and Engagement of Municipal Staff and Fleets

Compliance promotion with the general public is more effective if municipal employees are knowledgeable about the by-law, support it and abide by its provisions. An important early step in compliance promotion, then, is to communicate with municipal staff and companies on contract to the municipality, and ensure that municipal vehicles comply with the letter and spirit of the by-law. Communications with municipal staff can be done through:

- Broadcast e-mails
- Newsletters
- Bulletin board postings
- Lunch and learn sessions
- Workshops.

Some municipalities have established a fleet policy that limits operators from idling their vehicles for more than 10 seconds. Several municipalities have developed education programs for vehicle operators on the policy and developed incentives to encourage drivers to abide by it. All municipalities planning to adopt idling control by-laws should consider these actions.

Municipalities can inform the public (and remind drivers) of an idle-free policy for their fleet by displaying in all fleet vehicles windshield decals²² with an anti-idling message such as "I turn my engine **off** when parked."²³ This will encourage the driver to do so, as well as send a message to the public. To expand the impact of its fleet policy, a municipality may want to encourage or challenge transit operations and other highly public fleets to implement their own idle-free policies and programs.²⁴

Municipalities planning idling control by-laws should consider declaring all municipal facilities – including civic centres, libraries and community recreation centres – to be "idle-free zones" and put up signs to that effect.²⁵

ii) Information and Education for the General Public

Compliance promotion activities for the general public involve broader information and education programs. These can take many different forms, including:

- Media releases and events (usually accompanying the announcement of a new by-law, an idle-free awareness campaign or an enforcement blitz);
- Advertising in newspapers, on billboards, on radio or other media;
- Printed cards, brochures, decals and posters;
- Web pages, especially on municipal sites;
- Displays in public venues such as civic centres and libraries;
- Permanent signs and/or banners at idling hotspots; and
- Workshops on idling and on the by-law for fleets, parent-teacher associations, business improvement associations and other interested groups.

Like idle-free information and awareness campaigns, compliance promotion aims to encourage a new social norm that supports idle-free behaviour. As a result, it conveys all the positive reasons

for not idling, including cleaner air, decreased smog, acid rain and greenhouse gas emissions, savings in the cost of fuel and reduced wear and tear on vehicle engines. Compliance promotion tackles myths such as the benefits of idling for warming vehicle engines and saving the starter motor.

Compliance promotion alerts the public to the idling control by-law, its main requirements, and the penalties for non-compliance. Several municipalities have developed information cards that provide the rationale for their idling control by-law on one side of the card, and the provisions of the by-law on the other. These have been distributed both before and after enactment, to achieve public support for and voluntary compliance with the by-law.

iii) Warnings and Other Informal Responses to Violations

Compliance promotion can also involve informal ways of dealing with people who disregard the idling by-law. The goal of these informal responses is to educate, to seek the voluntary cooperation of non-compliant drivers and to bring them into compliance.

Contact with these drivers, or with the manager or owner of fleet vehicles, may occur as a result of a complaint or the observation of a violation by an enforcement officer. Enforcement officers consulted in the development of this report believe that the discussion between an enforcement officer and offending driver is usually effective in bringing about compliance.

Some municipalities also use mock tickets and warning letters as a form of compliance promotion. These can be used prior to passage of an idling control by-law, or to educate the public about a new by-law. The mock ticket is given to idling drivers or put on the windshield of vehicles left idling. It can be a very effective deterrent against future idling behaviour because the driver has been "caught" though not penalized for idling.

A few of the municipalities consulted in this research report use warning letters to promote compliance with idling by-laws. These are sent to the owners of vehicles about which complaints were made. The letters state that a complaint has been made about their vehicle idling for an extended period, remind the recipient that a by-law restricts idling, and provide reasons for not idling unnecessarily.

iv) Public Reports on Enforcement Activities and Success Stories

Compliance promotion is also strengthened when municipalities report on their enforcement activities and successes, and when this information is broadcast widely in the community. Reporting on enforcement activities tells community members that this issue is important, that municipal officials are acting on it, and that the municipality is responsive to public concerns about vehicle idling. It also tells citizens who might not otherwise be deterred that they may be subject to a ticket or summons and a fine for not complying with the law.

Success stories that report on changes in idling behaviour in the community as a result of compliance promotion and enforcement can also encourage people to support the by-law and deter non-compliance. These kinds of reports require municipalities to monitor and evaluate their enforcement efforts. Monitoring and evaluation will be discussed in more depth in Section 4.5.

4.4 Legal Action to Compel Compliance

Enforcement is essential to compliance with environmental laws, according to the International Network of Environmental Compliance and Enforcement (INECE), an organization of environmental officers from more than 100 countries. "In any society, many people will not comply with the law unless there are clear consequences for non-compliance."²⁶ Formal mechanisms to enforce new

laws are most effective if they are in place and utilized when requirements go into effect. "Delaying enforcement can undermine the credibility of the program and make it difficult to create an atmosphere of deterrence."²⁷ The INECE further recommends that enforcement is needed throughout the life of a regulation or regulatory program, to achieve initial compliance and ensure that compliance is sustained.

There are a number of approaches that municipalities can take to enforce their by-laws, encourage compliance by those who otherwise will not change their behaviour, and to impose a sanction on those who ignore the law. These include:

- Complaints-based enforcement
- Proactive enforcement (e.g. enforcement "blitzes" or ongoing proactive enforcement)
- Some combination of the above options.

4.4.1 Complaints-based Enforcement

This is the most common approach that municipalities use to enforce idling control by-laws. Citizens phone in a complaint when an infraction occurs and are asked for information on the situation, location and vehicle licence plate. Alternatively, citizens may report a chronic idling problem that may or may not be taking place at the time of the complaint. If an enforcement officer is available, he or she may go to the site. If not, they may follow up with the complainant and the vehicle owner at a later time.

It is difficult to take legal action on the basis of these complaints, because most often the enforcement officer does not actually observe the idling behaviour. As a result, the most that an enforcement officer can do is notify the vehicle owner about the complaint and issue a warning about a potential penalty. Many municipalities believe that warnings by enforcement officers are quite effective in deterring idling by individual vehicle owners and by drivers of fleet vehicles whose company receives a visit or notice about the problem.

If, however, enforcement departments receive complaints about an idling infraction from more than one witness and the complaints are well documented, an enforcement officer may issue a summons and pursue legal action that will result in a penalty and deter future violations.

4.4.2 Proactive Enforcement

Responding to complaints is essentially a reactive enforcement strategy. More proactive enforcement strategies are also available to municipalities with idling control by-laws. Budget and staff constraints mean that no municipality can enforce everywhere or all the time. However, municipalities can conduct a targeted, well-publicized campaign that alerts drivers to the fact that they are subject to enforcement action, which deters idling. Priority locations for proactive enforcement might include:

- Locations where health concerns are high and public sympathy can be leveraged (hospitals, childcare centres, schools)
- Locations with a high public profile (city or town hall, community centres)
- Places about which lots of complaints have been made (tourist sites, highway service centres, bus stops, delivery areas)
- Places where idling is an ongoing issue (commuter rail stations, shopping centres).

i) The Enforcement Blitz

Some municipalities have carried out enforcement blitzes that are very effective at getting media attention for the by-law and highlighting its importance to the municipality. Blitzes can be held

shortly after a new idling control by-law is enacted or as part of a general idle-free campaign at the beginning of a summer smog season or at other times.

Blitzes involve a fairly large number of enforcement officers for a relatively short period of time. They usually take place at targeted locations where idling is problematic, where previous vehicle engine idling education has been done, and where signs alerting drivers to the by-law have been posted. Media and public attention is likely to be very high.

Monitoring of idling behaviour before and after the blitz and collection and publishing of statistics about enforcement activities during the event can provide good compliance promotion stories that reinforce support for the by-law and its deterrent effect.

Another advantage of an enforcement blitz is the concentrated and short-term use of enforcement personnel. A municipality can involve enforcement staff that normally might not enforce an idling control by-law, but for a short time could be spared for this task.

One of the drawbacks to enforcement blitzes is the creation of a public expectation of ongoing, high profile enforcement activities. When and if it becomes evident that this level of enforcement will not continue, drivers who are not convinced that idling should be curtailed could feel immune to prosecution and persist in flagrant idling behaviours. For this reason, if a municipality organizes an enforcement blitz, it should be integrated into an ongoing enforcement strategy.

ii) Ongoing Proactive Enforcement

Our research found no Canadian municipality that has yet undertaken an ongoing proactive enforcement strategy to back up an idling control by-law, although one community is planning such a strategy.²⁸

Such a proactive strategy would involve keeping tabs on idling hotspots and warning or ticketing idling drivers on an ongoing basis. As indicated earlier in this report, such a strategy would be much easier in many jurisdictions if enforcement of the idling control by-law were allocated to parking enforcement officers rather than to general by-law enforcement staff. Ongoing enforcement may have a longer-term deterrent effect than enforcement blitzes, and have more impact on changing social norms with respect to idling behaviour.

Where giving responsibility for enforcement to parking authorities is not possible, and then a quota on anti-idling tickets for enforcement officers could serve to sustain ongoing, proactive anti-idling enforcement. This approach would necessarily be more random, as officers keep their eyes out for idling violations while going about their other duties. Random enforcement may have less publicity potential, but may help to ensure that no one feels immune from the law.

iii) Combined Enforcement Strategies

These enforcement strategies are not mutually exclusive. The most effective strategy will likely be a mix of the above approaches, involving enforcement blitzes at particularly problematic idling hotspots or during smog season, and less-intensive but ongoing enforcement at other times.

4.5 Evaluating Enforcement Programs

Monitoring violations, tracking education and enforcement activities and evaluating any changes that result from these can be very useful for municipalities that pass idling control or other environmental by-laws. Monitoring and evaluation can help municipalities determine if the by-law and associated enforcement strategies are having a significant impact on idling and resultant air pollution and greenhouse gas emissions. A monitoring and evaluation effort can help provide

statistics that validate the program and discover "success stories" which are important for compliance promotion. A well designed program to measure enforcement activity and its impact can also aid a municipality in identifying weaknesses in the by-law or in specific enforcement activities, and amend these for better results.

An evaluation program requires some up-front planning to collect, store and analyze information. Most municipalities already collect enforcement data and store it on their computer systems. Many municipalities provide their enforcement officers with handheld computers for issuing tickets and summonses. For these municipalities, the collection and analysis of information necessary to monitor and evaluate an anti-idling enforcement program should not be difficult – although it will involve time and effort.

A thorough monitoring and evaluation programs for anti-idling enforcement would include the following activities:

1. Efforts to detect violations and determine where to target enforcement resources, including:
 - o Collecting and tabulating total numbers of complaints about idling vehicles and breaking these down by location, type of vehicle, specific fleets involved, etc.²⁹ Complaint numbers will not necessarily be an accurate reflection of the amount of idling that is occurring, but it will reflect the consciousness of the public about the issue, and may initially rise as a result of passing a by-law, because citizens feel that something can now be done about the problem; and/or
 - o Identifying specific idling "hotspots" from public complaints and by tapping the knowledge of enforcement officers and other municipal staff.
2. Collection of information to monitor and support enforcement actions. Useful information to collect would include:
 - o Data on compliance promotion efforts (e.g. number of signs posted and where, numbers of flyers distributed and to whom, workshops held, media messages published or broadcast, drivers contacted in social marketing programs and committing not to idle, etc.);
 - o Data on enforcement efforts, including enforcement contacts with complainants and idling drivers, warnings given, fines or summonses issued, etc. (This might include data on complaints not acted on because drivers are exempt from the by-law.);
 - o Anecdotal information from enforcement officers on the response of drivers contacted as a result of complaints or observed idling behaviour;
 - o Information on the time and effort required to undertake different types of enforcement activities and the relative effects of each; and/or
 - o Measure costs of the program including materials and wages.
3. Evaluation of enforcement efforts and their impacts on idling:
 - o Measure changes in knowledge and/or attitude of the public as a result of compliance promotion, an enforcement blitz or ongoing enforcement program (using a survey);
 - o Monitor changes in the numbers of complaints following passage of an idling control by-law, a compliance promotion program or enforcement blitz;
 - o Evaluate changes in behaviour of individual drivers or particular fleets of vehicles as a result of warnings or other enforcement actions (usually measured by observation at selected sites); and/or
 - o Calculate the cost of the program in relation to the changes seen, to determine if the program is an effective use of resources for reducing air pollution and climate change.

4.6 Summary

An enforcement strategy should be planned, implemented and evaluated whenever a municipality passes an idling control by-law. Enforcement is necessary to demonstrate the resolve of the municipal council to solve this problem, and to deter unnecessary and polluting idling behaviour.

Compliance promotion is an important element of enforcement, and should be integrated in the enforcement program. A mix of enforcement strategies may be the most effective means to ensure compliance and gradually reduce idling in our communities.

¹⁵ Whitehorse, New Westminster and Burnaby, B.C. have all taken this stand.

¹⁶ See OECD (Organization of Economic Cooperation and Development), 2003. *Voluntary Approaches or Environmental Policy: Effectiveness, Efficiency and Usage in Policy Mixes*. Another useful source is Fatma Maged, 2003. "Voluntary Approaches in Environmental Policy," in *Horizons*, 6:4 (13-17). This article is also available on the Internet at: http://policyresearch.gc.ca/page.asp?pagenm=v6n4_art_04.

¹⁷ See International Network of Environmental Compliance and Enforcement, 1992. *Principles of Environmental Enforcement*, available on the Internet at: <http://www.inece.org/Principi.htm>.

¹⁸ General by-law enforcement departments have responsibilities for a broad range of by-laws including: property standards, snow and ice removal, littering, dumping, open air fires, noise, signs, animal control, fencing, swimming pool enclosures, street closures, and other health, safety and nuisance issues.

¹⁹ Pat Ryan, City of Vancouver and Bill Wiles, City of Markham, personal communication.

²⁰ It may be difficult for municipalities that have allowed the establishment of drive-ins and car washes to do a great deal about idling in these venues. However, they are a major source of idling problems and complaints in many communities.

²¹ The International Network of Environmental Compliance and Enforcement makes this point in the previously cited *Principles of Environmental Enforcement*.

²² See the *Idle-Free Zone*, Natural Resources Canada's web site for examples of this kind of decal and many other resources that municipalities can use to inform the public about idling.

²³ It would be a good idea *not* to put this decal on municipal vehicles that are allowed to idle to power auxiliary equipment needed for work.

²⁴ For more information on municipal fleet idling policies, see the Clean Air Partnership's *A Model Idling Control Policy for Municipal fleets*, May 2005.

²⁵ Natural Resources Canada has artwork for anti-idling decals, signs and other materials that can be used free of charge by municipalities. See www.idling.gc.ca.

²⁶ International Network of Environmental Compliance and Enforcement, 1992. *Principles of Environmental Enforcement*, page 57.

²⁷ *Ibid*, page 57.

²⁸ Bill Wiles, Town of Markham. Personal communication.

²⁹ This would require call centre support.

[Previous](#) | [Contents](#) | [Next](#)

Natural Resources
CanadaRessources naturelles
Canada

Canada

NRCan > OEE > Conclusions

Communities and Government

5 Conclusions

Canadian municipalities are increasingly turning to idling control by-laws as one means of tackling the problem air pollution and greenhouse gas emissions within their towns and cities. This primer was prepared to help municipalities that are considering such a by-law, or are reviewing an existing by-law and its enforcement.

Drawing on the lessons from the review of existing by-laws, and after discussions with staff in many municipalities, we developed a model by-law that has fewer exemptions and that we believe will be easier to enforce than many existing by-laws. Until now, municipalities have tended to draw up new idling control by-laws by adopting most or all of the provisions of existing by-laws. This model by-law – based on an assessment of the strengths and weaknesses of existing by-laws – gives municipalities an alternative basis on which to construct an enforceable by-law that regulates and reduces vehicle idling.

Enforcement is the most challenging aspect of by-law implementation for municipalities. Effective enforcement requires time for planning and resources for implementation that municipal decision-makers need to consider when making a decision to regulate idling in their communities.

[Previous](#) | [Contents](#) | [Next](#)

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NRCan > OEE > Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Communities and Government

Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Table 1 - A: Stand-alone Idling control By-laws

Feature	Burlington	GVRD	Guelph	Huntsville	Kingston
When enacted	June 2004	Recommended June 2004	December 1998	September 2003	September 1997
Application	Vehicles (except rail)	Vehicles (except rail)	Vehicles (except rail)	Vehicles (except rail)	Vehicles (except rail) and boats
Exemptions	a, b, c, d, e, f, g, h, i, j	a, b, c, d, e, f, g, h, i, j, k, l	b, c, e, f, g, i, j, l, o	a, b, c, d, e, f, g, h, i, j, l, o	a, b, c, d, e, g, h, i, j, l, m, n
Location	Not specified	Not specified	Not specified	Not specified	Not specified
Time allowed	3 minutes in 60-minute period; Transit - 10 minutes	3 minutes in a 60-minute period	10 minutes in a 60-minute period Transit - 15 minutes	5 consecutive minutes; Transit - 15 minutes	3 minutes in a 60-minute period; Transit - 15 minutes
Enforcement agents	Parking enforcement officers	Not specified	By-law enforcement; Police dept.	By-law and parking enforcement	Parking enforcement
Type of enforcement	Not yet enforced	Model by-law for enactment by GVRD municipalities	Warnings	Education and warnings first; Solicited & received support of local businesses	Mainly warnings, summons and fines "last resort"
Fines	\$ 155 set fine (includes victim surcharge)	\$ 50 minimum (up to \$ 2000) recommended	No set fines	\$ 100	No set fines
Charges, warnings or summons issued	Friendly warning letters sent; Mock tickets given out with info on idling & by-law	To be decided by specific municipalities enacting the model by-law	None to date	Have warned tour buses; Issued some tickets, which were paid promptly	Warnings issued mainly to tour buses in city centre; a few summons issued
Additional comments	Came into force May 2005; Burlington also has provisions in noise by-law (5 min. limit)	Not much take-up of this model by-law because of enforcement issues	Plans to review the by-law and incorporate set fines	Has specific exemptions for driver rest stations, tour buses & specified locations	By-law in effect in former City of Kingston; revised by-law proposed for amalgamated city

Table 1 - B: Stand-alone Idling control By-laws

Feature	London	Markham	Niagara Falls	Oakville
When enacted	August 1999	June 2005	October 1998	August 2002
Application	Vehicles (except rail)	Vehicles (except rail)	Vehicles (except rail)	Vehicles (except rail)
Exemptions	a, b, c, d, e, f, g, h, i, j, l	a, b, c, d, f, g, j, l	a, b, c, d, e, f, g, h, i, j, l	a, b, c, d, e, f, g, h, i, j, l
Location	Not specified	Not specified	Not specified	Not specified
Time allowed	5 minutes Transit - 15 minutes	3 minutes continuously	3 minutes Transit - 15 minutes	5 minutes; Transit - 15 minutes
Enforcement agents	Public health inspectors	By-law enforcement officers	By-law enforcement officers	By-law enforcement officers
Type of	Complaints- based	Proactive enforcement campaign	Complaints-based; Intent	Verified complaints

enforcement	(though did have active surveillance initially)	planned	to issue summons on habitual offenders	
Fines	\$ 105 + \$ 20 victim surcharge	Not yet set at time of writing	No set fines	\$ 155 set fine
Charges, warnings or summons issued	Follow-up on 30-40 complaints since 1999; Issued several warnings	Will use friendly warnings & tickets as warranted	Warnings issued, mainly to bus companies	Several warnings issued; 2 trucking companies fined
Additional comments	Active educational program	Temperature exemption is above 30 or below 0. No special exemptions for transit vehicles.	Innovative services for tour bus drivers to prevent idling	Focus on education

Exemptions
Top
<p>(The specific wording varies from city to city.)</p> <ol style="list-style-type: none"> 1. Fire, police and emergency medical service vehicles 2. Vehicles participating in an emergency activity 3. Vehicles that remain motionless because of traffic conditions or mechanical difficulties 4. During hot or cold weathe 5. Where a medical doctor certifies that a person requires temperature maintained within a certain range 6. Mobile workshops (where operation of the motor is essential to the basic function of the vehicle) 7. Where idling is necessary for maintenance or repair 8. Transit vehicles while passengers are embarking or disembarking 9. Transit vehicles at a layover or stopover with passengers on board 10. Vehicles in a parade or other authorized event 11. A vehicle that operates a heating or refrigeration system for the preservation of cargo 12. Armoured vehicles, where a person remains inside guarding the contents, or while the vehicle is being loaded or unloaded 13. Ferry boats 14. Boats not at anchor or tied to a dock 15. Other 16. The original equipment manufacturer recommends longer idling period for operation of the vehicle 17. Continuous operation is essential to a basic function of the vehicle or equipment 18. Weather conditions justify the use of heating or refrigeration systems powered by the motor for the welfare of the operator, passengers or animals, or preservation of perishable cargo 19. Low temperatures make longer idling periods necessary after starting the motor or engine 20. Idling is for the purpose of flushing the radiator ... when such work is performed other than for profit 21. The vehicle is in an enclosed structure which prevents excessive noise emission 22. Located in a garage or depot intended for the long-term parking of the vehicle 23. Municipal other government or utility vehicles engaged in service of the public 24. Vehicles loading and unloading cargo 25. When necessary for start up of bus used for public transportation or for the comfort of passengers 26. Vehicles operating in the course of providing transit service
Top

[Previous](#) | [Contents](#) | [Next](#)

Date Modified: 2009-04-21

NRCan > OEE > Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Communities and Government

Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Table 1: Stand-alone Idling control By-laws (continued)

Feature	Pickering	Stratford	Toronto	Vaughan	Whitchurch Stouffville	Windsor	Woodstock
When enacted	February 2004	July 2001	1996 & 1998	June 2004	June 2003	June 2001	June 2002
Application	Vehicles (except rail)	Vehicles (except rail)	Vehicles (except rail), ferries and boats	Vehicles (except rail)	Vehicles	Vehicles (except rail) and boats	Vehicles (except rail)
Exemptions	a, b, c, e, f, g, h, i, j, l	a, b, c, d, e, f, g, h, i, j, k, o	a, b, c, d, e, f, g, h, i, j, p, q, r	a, b, c, d, e, f, g, h, i, j, l, m, n	a, b, c, e, j, l	a, b, c, d, e, f, g, h, i, j, l, m, n	a, b, c, d, e, f, g, h, i, j, l
Location	Not specified	Not specified	Not specified	Not specified	Listed Idle-free zones (16 sites)	Not specified	Not specified
Time allowed	5 consecutive minutes; Transit - 15 minutes	5 consecutive minutes; Transit - 15 minutes	3 minutes in 60-minute period; Transit - 15 minutes	5 consecutive minutes; Transit - 15 minutes	3 minutes in a 60 minute period	5 minutes in a 60 minute period; Transit - 15 minutes	5 consecutive minutes; Transit - 15 minutes
Enforcement agents	By-law enforcement or regional police	By-law enforcement	By-law staff in Transportation Services Division	By-law enforcement	No enforcement section	By-law enforcement & parking enforcement	By-law enforcement
Type of enforcement	Not actively enforced	Complaints-based	Mainly complaints-based; three "blitzes" in 1999, 2000 & 2003	Complaints based; Computer code to track complaints	Rely on voluntary compliance	Complaints-based and proactive (parking enforcement officers)	Complaints-based; Take an educational approach
Fines	No set fine	No set fine	\$ 105 set fine + \$ 25 victim surcharge	\$ 250 + victim surcharge requested	No set fine	\$ 105 + victim surcharge	No set fine
Charges, warnings or summons issued	None to date	No charges laid to date; Have given out warnings	247 tickets, 6 summonses, ~ 1350 warnings (to end of 2003)	None to date	None; Rely on voluntary compliance	None to date; educational approach	None to date
Additional comments			Toronto has included boats in its anti-idling provisions		Schools asking for idle-free signs	Windsor has also included boats and ferries	

Exemptions
Top
(The specific wording varies from city to city.)
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19. Low temperatures make longer idling periods necessary after starting the motor or engine
20. Idling is for the purpose of flushing the radiator ... when such work is performed other than for profit
21. The vehicle is in an enclosed structure which prevents excessive noise emission
22. Located in a garage or depot intended for the long-term parking of the vehicle
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[Top](#)[Previous](#) | [Contents](#) | [Next](#)

Date Modified: 2009-04-21



NRCan > OEE > Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Communities and Government

Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Table 2: Anti-Idling Provisions In Other By-laws in Some Municipalities

Feature	Brampton*	Caledon	Kingston*	Montreal	Markham*	Nanaimo	Newmarket*	District of North Vancouver
By-law type	Traffic and Parking By-law	Noise By-law	Noise By-law	Air Purification By-law	Noise By-law	Noise By-law	Noise By-law	Nuisance Abatement By-law and Traffic By-law
When enacted	Idling amendment added August 2001	June 1986 Amended June 1995	March 2004	1986	Amended 2003	1994 (amended 1997)	July 2004	Nuisance: 1996 Traffic: 2004
Application	Vehicles	Vehicle motor	Vehicles and auxiliary equipment	Vehicles	Engine or motor in a vehicle or auxiliary equipment	Truck or bus with diesel engine	Vehicle motor	Motor vehicle engine
Exemptions	None	p, q, r, s, t	q, r, u	q, r	p, q, r, s, t, u	a, v, x, y	k, p, q, y	Nuisance: a, g, q Traffic: c, g, j, l, q
Location	Where signs displayed (residential area near factories)	In residential areas	Not specified	Less than 60 metres from an opening in a building	In residential areas	Highway, private or public place	Not specified	Not specified
Time allowed	3 minutes	5 minutes	5 minutes	4 minutes	5 minutes	15 minutes	10 minutes	3 minutes
Enforcement agents	By-law enforcement officers	By-law enforcement officers	Parking enforcement; Police		By-law enforcement officers	By-law officer	By-law enforcement or regional police	By-law enforcement officer and RCMP
Type of enforcement	Not actively enforced; Factories ensure compliance	Complaints-based education; 20 complaints per year	Mainly in town centre with tour buses; Educational approach	Mainly educational response to complaints	Complaints-based; Resolved by talking to offender	Complaints-based	Complaints-based	Complaints-based. Mainly aimed at tour buses.
Fines	No set fine	No set fine	\$ 100	No set fine	No set fine	\$ 100	No set fine	Nuisance: \$ 50 Traffic: \$ 20 min.
Charges, warnings or summons issued	None to date	Not available	None to date	Not available	No summons issued to date	Not aware of any	None to date	Not available
Additional comments		Model for anti-idling provisions in Ontario noise by-laws	Inconsistent allowable idling times in stand-alone & noise by-laws	This appears to be the first municipal idling control by-law in Canada			Stand-alone by-law in preparation	

Exemptions

[Top](#)

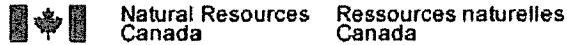
(The specific wording varies from city to city.)

1. Fire, police and emergency medical service vehicles
2. Vehicles participating in an emergency activity
3. Vehicles that remain motionless because of traffic conditions or mechanical difficulties

4. During hot or cold weathe
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6. Mobile workshops (where operation of the motor is essential to the basic function of the vehicle)
7. Where idling is necessary for maintenance or repair
8. Transit vehicles while passengers are embarking or disembarking
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26. Vehicles operating in the course of providing transit service

[Top](#)[Previous](#) | [Contents](#) | [Next](#)

Date Modified: 2009-04-21



NRCan > OEE > Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Communities and Government

Appendix B: Tables Summarizing Key Features of Existing Idling Control By-Laws

Table 2: Anti-Idling Provisions In Other By-laws in Some Municipalities (continued)

Feature	Ottawa	Richmond Hill	Vancouver	Victoria
By-law type	Noise By-law	Noise By-law	Motor Vehicle Noise By-law	Noise By-law
When enacted	2004	July 2002	1998	2003
Application	Vehicles (except rail)	Engine in any motor vehicle or auxillary equipment	Buses with diesel engines	Truck or bus engines
Exemptions	q, r, z	p, q, r, s, t	v	a, v
Location	Not specified	Residential area or quiet zone	Not specified	Not specified
Time allowed	5 minutes	5 minutes	3 minutes	3 minutes
Enforcement agents	By-law enforcement; Police	By-law enforcement; Police	Parking enforcement and police officers	By-law enforcement
Type of enforcement	Complaints-based, but only enforce noise-based complaints		Active and complaints-based enforcement	Complaints based, but only enforce noise-based complaints
Fines	\$ 305 + \$ 75 victim surcharge	No set fine	Minimum \$ 100 up to \$ 2000	Minimum \$ 200
Charges, warnings or summons issued	N/A	Not tracked though warnings have been issued	Not known	N/A
Additional comments	Total exemption for transit vehicles		Plans to adopt stand-alone idling control by-law in 2005	

Exemptions
Top
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 - 24. Vehicles loading and unloading cargo
 - 25. When necessary for start up of bus used for public transportation or for the comfort of passengers
 - 26. Vehicles operating in the course of providing transit service
- Top

[Previous](#) | [Contents](#) | [Next](#)

Date Modified: 2009-04-21