

## **List of Appendices**

### **APPENDIX A:**

**Additional Elements of Diesel Exhaust and Their Effects**

### **APPENDIX B:**

**Brookline Clean Construction Survey**

### **APPENDIX C:**

**Model Clean Contract Specification**

### **APPENDIX D:**

**Model Clean Certification Statement**

### **APPENDIX E:**

**Ordinances from Other Jurisdictions**

### **APPENDIX F:**

**Massachusetts Anti-Idling Law and Regulation**

### **APPENDIX G:**

**Town of Brookline Anti-Idling Bylaw**

## **APPENDIX A:**

### Additional Elements of Diesel Exhaust and Their Effects:

#### **Hydrocarbons (HC)**

Hydrocarbons are compounds made of hydrogen and carbon. Most motor vehicles and engines are powered by hydrocarbon-based fuels such as gasoline and diesel. Hydrocarbon pollution occurs when unburned or partially burned fuel is emitted from the engine as exhaust or when fuel evaporates directly into the atmosphere. Hydrocarbons include many toxic compounds that cause cancer and other adverse health effects. Hydrocarbons also react with nitrogen oxides in the presence of sunlight to form ozone. In typical urban areas, a very significant proportion of hydrocarbon pollution comes from cars, buses, trucks, and non-road mobile sources such as construction vehicles and boats.

#### **Nitrogen Dioxide (NO<sub>x</sub>)**

Nitrogen oxides, (NO<sub>x</sub>) are the sum of nitric oxide (NO) and NO<sub>2</sub>. Other oxides of nitrogen including nitrous acid and nitric acid are part of the nitrogen oxide family.

NO<sub>2</sub> forms quickly from emissions from cars, trucks and buses, power plants, and off-road equipment. In addition to contributing to the formation of ground-level ozone, and fine particle pollution, NO<sub>2</sub> is linked with a number of harmful health effects. Current scientific evidence links short-term NO<sub>2</sub> exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Near-roadway (within about 50 meters) concentrations of NO<sub>2</sub> have been measured to be approximately 30 to 100% higher than concentrations away from roadways.

NO<sub>x</sub> react with ammonia, moisture, and other compounds to form small particles. These small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admissions and premature death.

#### **Ozone**

Ozone is formed when NO<sub>x</sub> and volatile organic compounds react in the presence of heat and sunlight. Children, the elderly, people with lung diseases such as asthma, and people who work or exercise outside are at risk for adverse effects from ozone. These include reduction in lung function and increased respiratory symptoms as well as respiratory-related emergency department visits, hospital admissions, and possibly premature deaths.

Emissions that lead to the formation of NO<sub>2</sub> generally also lead to the formation of other NO<sub>x</sub>. Emissions control measures leading to reductions in NO<sub>2</sub> can generally be expected to reduce population exposures to all gaseous NO<sub>x</sub>. This may have the important co-benefit of reducing the formation of ozone and fine particles both of which pose significant public health threats.

#### **Carbon Monoxide (CO)**

Carbon monoxide (CO) is a colorless, odorless gas emitted from combustion processes. Nationally and, particularly in urban areas, the majority of CO emissions to

ambient air come from mobile sources. CO can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. At extremely high levels, CO can cause death.

Exposure to CO can reduce the oxygen-carrying capacity of the blood. People with several types of heart disease already have a reduced capacity for pumping oxygenated blood to the heart, which can cause them to experience myocardial ischemia (reduced oxygen to the heart), often accompanied by chest pain (angina), when exercising or under increased stress. For these people, short-term CO exposure further affects their body's already compromised ability to respond to the increased oxygen demands of exercise or exertion.

**APPENDIX B:**

**Brookline Clean Construction Survey**

		<b>&lt;-----PARAMETERS-----&gt;</b>						
		<b>Idling Limit</b>	<b>Fuel</b>	<b>HP</b>	<b>PM Removal</b>	<b>Applicable</b>	<b>Effective</b>	
		<b>minutes</b>		<b>Off Road</b>	<b>PPM</b>	<b>Contract Size</b>	<b>Date</b>	
						<b>or</b>		
						<b>Duration</b>		
Brookline								
Building Dept		5	ULSD	>50	85	\$2,000,000 or > 10 days	Later	
Public Works		5	ULSD		DPf and/or SCR		5 to 10 year program	
MA Highway	Non-Road	5		>5	Control Device	Installed	No	
MassDEP: Waste Water and Drinking Water				>5				
Boston								
	City owned	5	ULSD		20			
	Contracted	5	ULSD	>5	85	\$500,000	31-Dec-15	
Providence RI		5	ULSD	>7	min 25	= or < 5 days \$2,000,000	01-Jan-10	
Chicago			ULSD	>5	min 25	\$2,000,000		
New York City		5	ULSD		BAT	\$2,000,000		
PM - Particulate Matter in Parts per Million								
BAT - Best Available Technology								
> - Greater than								
ULSD - Ultra Low Sulfur Diesel								
SCR - Selective Catalytic Reduction (up to 75% NO <sub>x</sub> )							Rev 0	
DPF - Diesel Particular Filter (85 -95% PM							01-May-13	

## **APPENDIX C:**

### **MODEL CONTRACT SPECIFICATION**

(LANGUAGE TO BE ADDED FOR PROJECTS WHEREBY TOTAL COST EXCEEDS \$2,000,000)

#### **A. Diesel Emission Control Technology**

##### **1. Diesel Onroad Vehicles**

All diesel onroad vehicles on site for more than 10 total days must have either (1) engines that meet U.S. Environmental Protection Agency (EPA) 2007 onroad emissions standards or (2) emission control technology verified by EPA or the California Air resources Board (CARB) to reduce PM emissions by a minimum of 85%.

##### **2. Diesel Generators**

All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.

##### **3. Diesel Nonroad Construction Equipment**

a. All nonroad diesel engines on site must be Tier 2 or higher. Tier 0 and Tier 1 engines are not allowed on site.

b. All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines 50hp and greater and by a minimum of 20% for engines.

4. Upon confirming that the diesel vehicle, construction equipment, or generator has either an engine meeting Tier 4 non road emissions standards or emission control technology, as specified above, installed and functioning, the Owner will issue a compliance sticker. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in a visible, external location as designated by the Owner.

5. Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.

6. All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less.

## **B. Idling Requirements**

During periods of inactivity, idling of diesel onroad vehicles and nonroad equipment shall be minimized and shall not exceed five minutes in any sixty-minute period accept as allowed under the Town's bylaw (7.5.8) and MGL Chapter 90; section 16A.

## **C. Exemptions**

1. Onroad diesel vehicles, nonroad construction equipment, and generators on site for 10 working days or less over the life of the project need not install emission control technology. This equipment must be included on the equipment list submitted by the contractor and approved by the developer.
2. If the contractor can prove to the Owner's satisfaction that for a particular class of onroad diesel vehicle, nonroad construction equipment, or generator, (1) no alternative equipment with a Tier 4 engine is available, (2) it is not technically feasible to meet the control level specified above with a verified device, or (3) installing the control device would create a safety hazard or impaired visibility for the operator, then the contractor may, with the Owner's written approval, drop down to a lower level of control.
3. The Owner's representative may create an exemption when there is a compelling emergency need to use diesel vehicles or engines that do not meet the contract conditions for emission controls. An example would be the need for rescue vehicles or other equipment to prevent or remedy harm to human beings or nearby property. Meeting contract deadlines, failure to rent equipment in a timely manner, planned unavailability, or lack of advance planning are not considered compelling emergencies.
4. The Owner may provide an exemption lasting no more than 30 days to a contractor, if the contractor can prove with valid documentation and to the Owner's satisfaction that the appropriate emission control equipment has been ordered in a timely manner after the bid was awarded, but has yet to be installed due to delays attributable to the equipment manufacturer and beyond the control of the contractor. The contractor must install the retrofit as soon as practicable once it has been delivered, and shall submit proof thereof when installation is complete. Provided, however, that such exemption shall not be available to a contractor who already owns an equivalent piece of equipment that meets the engine requirements for the project, as the contractor may use that piece of equipment.

## **D. Additional Diesel Requirements**

1. Construction shall not proceed until the contractor submits a certified list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:
  - a. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.



## **F. Compliance**

All onroad diesel vehicles, nonroad construction equipment, and generators must be compliant with these provisions whenever they are present on the project site.

## **G. Non-Compliance**

1. If any onroad diesel vehicle, nonroad construction equipment, or generator is found to be in non-compliance with the contract terms, the equipment will be immediately removed from the job site.
2. Once the contractor has brought previously non-compliant machinery into compliance, the Owner's representative shall promptly issue the contractor a written acknowledgment of compliance.

## **H. Costs**

All costs associated with the acquisition and installation of emission control technology are considered incidental to the cost of the project; no additional compensation will be provided.

**APPENDIX D:**

**Model Certification Statement**

CERTIFICATION STATEMENT

I hereby certify:

1. That the vehicle(s) identified in the attached spreadsheet that will be retrofitted are essential to the construction activities I have agreed to perform under contract with Organization/Company Name.
2. That I am fully aware that some Authorized Installers require the vehicle(s) to be retrofitted be brought to their shop to install the approved retrofits, and that this cost is not covered by either this program or the Authorized Installer, but instead is the responsibility of the vehicle owner(s).
3. That the retrofit device(s) will remain on the vehicle, and in working order, for a minimum of 3 years after installation. [*Note: This does not apply to rental retrofit device(s)*]
4. That any discrepancy to the above will be reported to Organization/ Company Name point of contact within 10 business days.
5. That all of the above conditions will be followed. Any deviation will be considered a breach in the agreement.

I understand that my vehicle(s) are subject to random and scheduled inspections to verify that the device(s) are installed and operating properly.

APPLICANT CERTIFICATION

I certify to the best of my knowledge that I will comply with the items listed above and that I am a legally authorized signatory or designee for the applicant.

\_\_\_\_\_  
Signature            Title

\_\_\_\_\_  
(Print Name)      Date

\_\_\_\_\_  
Company Name          Phone Number

\_\_\_\_\_  
Company Address

Please return the completed application to:  
Organization/Company Name  
Organization/Company Address  
Attn: Organization/Company Contact Name  
Organization/Company Contact Email

## **APPENDIX E: Ordinances from Other Jurisdictions**

### **Boston Ordinance Summary**

Boston Docket #1660 Proposed

#### **Compliance Date**

December 31, 2015

#### **Enforcement**

Contractors shall be liable to pay the City liquidated damages in the amount of up to \$5,000 for each violation.

#### **Equipment**

- **Non-road diesel** vehicles **contracted by the City of Boston** having a diesel engine of **50 horsepower** or greater used in **City construction projects**: This includes, but is not limited to backhoes, bulldozers, compressors, cranes, excavators, generators, and similar equipment, including stationary equipment used in any construction project.
- **On-road diesel** vehicles **contracted by the City of Boston** used in **City construction projects**: This includes any self-propelled vehicle designed for transporting persons or property on a street or highway that operates on diesel fuel and has a gross vehicle weight rating of **14,000 pounds or more**.

#### **Technical Requirements**

- All on-road and non-road vehicles shall be powered by **ultra-low sulfur fuel**
- All on-road and non-road vehicles shall limit **unnecessary idling** to **five minutes**
- All **City owned, leased, or operated** on-road and non-road vehicles **shall meet EPA emissions standards for new vehicles in effect in 2007 or later** for their respective classes of vehicle **or** have diesel emission control **technology that removes at least 20 percent of particulates** from the exhaust stream.
- **All City contracted on-road and non-road** vehicles **shall meet EPA emissions standards for new vehicles in effect in 2007 or later** for their respective classes of vehicle **or** have diesel emission control **technology that removes at least 85 percent of particulates** from the exhaust stream. Such technology shall not result in a net increase in nitrogen oxides, particulate matter, or black carbon.
- In no case shall City contracted on-road and non-road vehicles not meeting EPA's Tier 2 non-road emission standards (40 CFR Parts 9, 69, et. al.) be allowed.
- An independent study of the effectiveness of diesel emissions control technology shall be complete within five years of the effective date of this ordinance.

## Exemptions

- Diesel-powered City owned, leased, or operated diesel vehicles would be subject to less stringent requirements.
- **Contracted or sub-contracted** vehicles or equipment provide the **total estimated cost** of the contract is **\$500,000 or less**.
- **City owned, leased, contracted or operated** diesel vehicles in operation **fewer than 100 hours a year**.
- **City owned, leased, contracted or operated** diesel vehicles to be **sold or surplus** before December 31, 2015
- **City owned, leased, contracted or operated** diesel vehicles for which it is determined, supported by data concerning annual vehicle usage, fuel consumption, and emission rates, that it is **more cost effective to withhold** diesel emission control technology and install higher-yield diesel emission control equipment on other vehicles.

## Cook County Ordinance Summary

Cook County IL Ordinance 09-O-36 May 19, 2009

### Purpose

To minimize public health risks from exposure to diesel particulate emissions as expeditiously as practicable

### Compliance Date

May 9, 2009 to January 1, 2016 as noted

### Enforcement

Contractors shall be liable to pay the City liquidated damages in the amount of up to \$5,000 for each violation not to exceed a total of \$50,000.

### Equipment

- **Non-road diesel** vehicles **contracted by Cook County** having a diesel engine of **50 horsepower** or greater used in County **construction projects**: This includes, but is not limited to backhoes, bulldozers, compressors, cranes, excavators, generators, and similar equipment, including stationary equipment used in any construction project.
- **On-road diesel** vehicles **contracted by Cook County** used in County **construction projects**: This includes any self-propelled vehicle designed for transporting persons or property on a street or highway that operates on diesel fuel and has a gross vehicle weight rating of **8,500 pounds or more**.

### Technical Requirements

- **All on-road and non-road** vehicles shall be powered by **ultra-low sulfur fuel** effective **May 19, 2009**
- No contractor shall operate any **non-road diesel vehicle** in the performance of a public works contract unless that vehicle has installed controls that achieve a particulate matter **reduction of at least 50 percent** from uncontrolled engine emission levels effective **May 19, 2011**.

- **Prime contractors** shall not operate any **on-road or non-road diesel** vehicle in the performance of a public works contract unless that vehicle has installed controls that achieve a particulate matter **reduction of at least 85 percent** from uncontrolled engine emission levels **or** that reduces emissions to **less than or equal to 0.01 grams of PM per brake horsepower-hour** effective **January 1, 2014**.
- **Prime and subprime contractors** shall not operate **on-road or non-road diesel vehicle** in the performance of a public works contract unless that vehicle has installed controls that achieve a particulate matter **reduction of at least 85 percent** from uncontrolled engine emission levels **or** that reduces emissions to **less than or equal to 0.01 grams of PM per brake horsepower-hour** effective **January 1, 2016**.

## Exemptions

- This ordinance does not apply to the City of Chicago.
- Contracted or sub-contracted vehicles or equipment provided the **total estimated cost** of the contract is **\$2,000,000 or less**.
- **Shall not apply to vehicles working three days or less over the life of the project.**
- **Non-road diesel vehicles will be allowed to operate at a particulate matter reduction level of 25 percent if** Cook County determines that the vehicle **can't be retrofit** to operate at a particulate matter level **reduction of 50 percent**. This exemption will **not be allowed after May 19, 2011**.
- **Beginning January 1, 2014** for prime contractors and **January 1, 2016** for prime and/or subprime contractors, **on-road and/or non-road diesel vehicles** will be **allowed to operate** at a particulate matter **reduction level of 25 to 50 percent** if Cook County determines that the **vehicle can't be retrofit** to operate at a higher level of reduction.
- **Beginning January 1, 2014** for prime contractors and **January 1, 2016** for prime and/or subprime contractors,, any **on-road diesel vehicle** that has been **retrofitted** to operate at a particulate matter **reduction level of 50 percent prior to the effective date of this ordinance** shall have **one addition year** to be retrofitted to operate at a particulate matter **reduction level of 85 percent**.
- Any **non-road diesel vehicle** that has been **retrofitted** to operate at a particulate matter **reduction level of 25 percent prior to the effective date of this ordinance** shall have **one addition year** to be retrofitted to operate at a particulate matter **reduction level of 50 percent**. This exception will be **phased-out beginning January 1, 2014**.

## Chicago Ordinance Summary

Section I, Chapter 2-92, section 2-92-595 of the Municipal Code of Chicago

### Compliance Date

Phased in between January 1, 2014 to January 1, 2020 as noted

### Enforcement

Contractors shall be liable to pay the City liquidated damages in the amount of up to \$5,000 for each violation not to exceed a total of \$50,000.

### Equipment

- **Non-road diesel** vehicles and equipment **contracted by Cook County** having a diesel engine of **50 horsepower** or greater used for **construction projects**.
- On-road heavy-duty diesel vehicle means a motor vehicle with a gross vehicle weight rating of **at least 8,500 pounds** that is powered by a compression- ignition engine and which is not a heavy-duty alternative-fuel vehicle used for **construction projects**

### Technical Requirements

- All on-road and non-road vehicles shall be powered by **ultra-low sulfur fuel** for effective **June 1, 2011**.
- **All on-road and non-road vehicles** shall **minimize idling** effective **June 1, 2011**.
- This ordinance **requires meeting certain minimum EPA standards** and also requires **meeting a calculated clean fleet score (CFS) based on the aggregated emission performance** of all the heavy-duty on-road vehicles, off-road vehicles, and off-road equipment used for the construction project. Increasing the level of PM reduction results in higher CFS values. **The highest CFS (5.0), corresponds to the emissions level of a 2010 model year on-road or off-road vehicle.**
- Effective **January 1, 2014: All heavy-duty on-road vehicles** must **meet EPA standards for model year 1998 or be retrofitted with a verified diesel emission control device**. **All non-road vehicles or equipment** must **meet EPA Tier 1 Non-Road Diesel Standards or be retrofitted with a verified diesel emission control device**. The combined fleet of heavy-duty on-road diesel vehicles, non-road diesel vehicles and non-road equipment **must have a minimum clean fleet score of 2.1**.
- Effective **January 1, 2017: All heavy-duty on-road vehicles** must **meet EPA standards for model year 1998 or be retrofitted with a verified diesel emission control device**. **All non-road vehicles or equipment** must **meet EPA Tier 1 Non-Road Diesel Standards or be retrofitted with a verified diesel emission control device**. The combined fleet of heavy-duty on-road diesel vehicles, non-road diesel vehicles and non-road equipment **must have a minimum clean fleet score of 3.0**.
- Effective **January 1, 2020: All heavy-duty on-road vehicles** must **meet EPA standards for model year 1998 or be retrofitted with a verified diesel emission control device**. **All non-road vehicles or equipment** must **meet EPA Tier 1 Non-Road Diesel Standards or be retrofitted with a verified diesel emission control device**. The combined fleet of heavy-duty on-road diesel vehicles, non-road diesel vehicles and non-road equipment **must have a minimum clean fleet score of 4.0**.

## Exemptions

- Contracted or sub-contracted vehicles or equipment provided the ***total estimated cost*** of the contract is ***\$2,000,000 or less***.
- If a waiver is granted can exclude from the clean fleet all the heavy-duty on-road vehicles, off-road vehicles, and off-road equipment used for the construction project until January 1, 2017.
- If a waiver is granted can exclude from the clean fleet up to 50% of the heavy-duty on-road vehicles, off-road vehicles, and off-road equipment used for the construction project from January 1, 2017 until January 1, 2020.
- If a waiver is granted can exclude from the clean fleet up to 25% of the heavy-duty on-road vehicles, off-road vehicles, and off-road equipment used for the construction project after January 1, 2020.

## **APPENDIX F:**

### **Massachusetts Anti-Idling Law and Regulation**

#### **The Massachusetts Anti-Idling Law**

**Massachusetts General Law (MGL), Chapter 90, Section 16A,  
310 Code of Massachusetts Regulation (CMR), Section 7.11 and  
MGL, Chapter 111, Sections 142A – 142M**

The Statute, MGL, Chapter 90, 16A says:

“No person shall cause, suffer, allow, or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes. This section shall not apply to:

- Vehicles being serviced, provided that operation of the engine is essential to the proper repair thereof, or
- Vehicles engaged in the delivery or acceptance of goods, wares, or merchandise for which engine assisted power is necessary and substitute alternate means cannot be made available or,
- Vehicles engaged in an operation for which the engine power is necessary for an associated power need other than movement and substitute alternate power means cannot be made available provided that such operation does not cause or contribute to a condition of air pollution.”

The Regulation, 310 CMR 7.11, tracks this language.

**Note: the regulation applies to all motor vehicles.**

#### **Penalties**

- Penalties can range from \$100(MGL Chapter 90, Section 16A) to as much as \$25,000 (MGL Chapter 111, Section 142A);
- Drivers and/or companies can be held responsible for paying the fine;
- Local police have the authority to enforce the law, as do health officials or other officials who hold enforcement authority.

**The goal of the Massachusetts Anti-Idling law is to improve air quality by reducing unnecessary air pollution from idling vehicles. The law limits unnecessary engine idling to five minutes.** Drivers sometime wonder when idling might be considered necessary. The following questions and answers are intended to help drivers determine when engine idling could be considered necessary and when they should shut the engines down.

#### **Why is there an anti-idling law?**

It's basic common sense: there is already too much pollution in the air. Massachusetts consistently has days when air pollution exceeds ozone standards.

#### **Is all engine idling prohibited?**

No. While the law does prohibit unnecessary idling, it also recognizes that there are times when idling is simply unavoidable and lists three specific exemptions: when an

engine is being repaired and operating the engine is necessary for the repair; when a vehicle is making deliveries and associated power is necessary; and when the engine is used to provide power to another device.

### **What are some examples of how the exemptions work?**

The two more common situations facing most drivers are the exemptions allowed for making deliveries and to run a device that does not have its own power. Common sense will help drivers determine whether engine idling is necessary or not.

- *Deliveries:* School buses that must run their engines to operate flashing lights while picking up or dropping off passengers are a good example of necessary idling. State law requires the operation of flashing lights while loading and unloading children at school or on regular school bus routes. With no other power source to operate the lights other than running the engine, idling the engine is necessary.
- *Additional devices, or auxiliary power units:* Refrigerator units on trucks with perishable goods or vehicles operating special equipment, such as a lift on the back of a truck to move goods in and out of the truck or wheelchair lifts in buses or vans that may require engine power to operate are common examples of equipment that are operated with the engine power. Another example might include “bucket” trucks that allow a worker to reach wires on telephone poles or tree branches for trimming.

### **Are there other times when it’s OK to idle not listed in the law?**

The law prohibits unnecessary idling, then lists three exemptions to that rule. So there are other times when idling is permitted as long as the idling is absolutely necessary.

For example, running the engine to operate the windshield defroster to clear a windshield of ice on an extremely cold day is a good example of necessary idling. It’s a safety problem if you cannot see where you’re going and if the windshield is not warm enough to melt snow and freezing rain while driving. Running the engine while actively clearing snow and ice off the vehicle and to warm the windshield and interior of the vehicle is necessary idling.

Our common sense also tells us that heaters and air conditioning units almost always bring the vehicle’s interior into a comfortable range in a short time. We also know that heaters and air conditioning units work faster when the vehicle is being driven, not when it is left idling. So most vehicles, most of the time, will reach a comfortable temperature within the first five minutes of driving. Some heavy vehicles, such as buses or trucks, may need some additional time to bring interior temperatures into a comfortable range.

### **What are a few examples of unnecessary idling?**

- Sitting in your car in a parking lot with the engine on during mild or cool weather is unnecessary. The interior of your car will stay warm for 5 to 10 minutes on all but the coldest days.
- Leaving the vehicle running while unattended to let the heater warm it or the air conditioner cool it for extended periods of time is unnecessary idling (it is also in violation of motor vehicle law). Five minutes should be the maximum amount of time unless weather conditions are extreme, and the engine should not be left running while the vehicle is unattended for any length of time.

- Operating devices not related to transporting passengers or goods. Letting the engine run for an hour or more to play a movie or to charge a cell phone causes unnecessary pollution, is a nuisance for others nearby and puts excessive wear and tear on the engine.

**Am I causing more pollution by stopping and starting the engine?**

No. Once the engine has warmed up, an idling engine causes more pollution by running than by stopping and starting up again. Studies indicate that the trade-off for light- and medium-duty gasoline powered vehicles is about 10 seconds (i.e. the vehicle will produce more pollution idling longer than 10 seconds than it will by shutting down and restarting the engine). The time trade-off on medium- and heavy-duty diesel engines is about 30 seconds.

**Won't I wear out my starter if I keep stopping and starting the engine?**

Fleet managers of companies with strict anti-idling policies report that they do not replace starters in their vehicles more frequently than vehicles that are left running for extended periods. In fact, more damage occurs to engines that are left idling over long periods of time.

**Who would I complain to if I see a vehicle idling unnecessarily?**

The best place to start is your local Board of Health. Other possibilities include local police, DEP or the EPA. Enforcement personnel cannot respond to every complaint about idling vehicles, and there are instances when it is not obvious why a vehicle needs to idle longer than five minutes.

But many of the complaints about excessive idling are about the same vehicles in the same locations routinely left idling, many times out of habit. For people living or working near those vehicles the exhaust that they are subjected to is not just a nuisance, it's a real health problem.

**Where would I find copies of the law and regulation?**

The law is Massachusetts General Law (MGL) Chapter 90, Section 16A and the regulation is 310 Code of Massachusetts Regulation (CMR) 7.11. The wording is the same for both the law and the regulation. Enforcement authority and fine structures differ somewhat between the law and the regulation.

**Do the Anti-idling law and regulation apply to all vehicles?**

The law and regulation apply to all motor vehicles. All motor vehicles contribute to air pollution and can create a nuisance if the exhaust is affecting others. Why should people be allowed to pollute the air unnecessarily?

Source: Massachusetts Department of Environmental Protection, 2007 Idling Reduction Toolkit.

**APPENDIX G:**  
**Brookline Anti-Idling Bylaw**

**SECTION 7.5.8 IDLING OF MOTOR VEHICLES**

No person shall cause, suffer, allow or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped, on a private way or on private property, for a foreseeable period of time in excess of five minutes. This prohibition shall not apply to (a) vehicles being serviced, provided, that the operation of the engine is essential to its proper repair, or (b) vehicles engaged in the delivery or acceptance of goods, wares or merchandise for which engine assisted power is necessary and substitute alternate means cannot be made available, or (c) vehicles engaged in an operation for which the engine power is necessary for an associate power need other than movement and substitute alternate power means cannot be made available, provided, that such operation does not cause or contribute to a condition of air pollution