

# VIRGINIA BEACH PUBLIC SCHOOLS IDLE-REDUCTION CAMPAIGN



**Program Kick-Off**  
Virginia Beach, May 6th

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Virginia Clean Cities

# Why Is Idling Harmful to the Environment?

- Excessive idling releases harmful pollutants into the air
- Idling emits:
  - 72 g/h of Nitrogen Oxide (NO<sub>x</sub>)
  - 300 mg/h Particulate Matter (PM)
  - 10 kg/h of Carbon Dioxide (CO<sub>2</sub>)
  - Volatile Organic Compounds (VOCs)
- All of these are harmful to the environment AND to public health
- Reducing idling can help reduce emissions associated with bus exhaust

Sources: Argonne National Laboratory, MDC Anti-Idle Toolkit

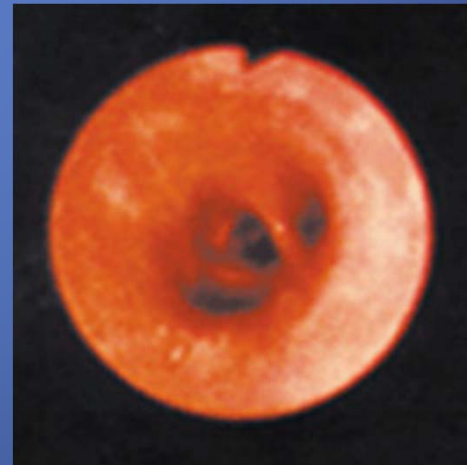


# Illustrations

**NORMAL LUNG  
AIRWAY**



**INFLAMMED  
LUNG  
AIRWAY**



# Illustrations

**OZONE DAMAGED  
PLANT**

**NORMAL  
PLANT**



# What Does Excessive Idling Cost?

- Idling a school bus for more than 10 minutes per day can add hundreds of dollars per year in fuel cost
- On average, one hour of idling a bus engine wastes  $\frac{1}{2}$  gallon of diesel fuel
- Significant savings can be made by reducing idle time
  - Fleet of 10 buses reduces idling by a half hour a day for a year
  - Savings are: 450 gallons of diesel and \$1,274

Source: MDC Anti-Idle Toolkit

# Project Overview

- This project will seek to reduce the amount of time per day that you idle your bus
- Will save money and improve air quality
- Installation of technology
  - Webasto Thermo-Top Heater
- Before and after survey