School Flag PROGRAM

Know Your Air Quality to Protect Students Health

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Outline

- Who are CRPC & LCF?
- Ozone & Health Effects?
- What is the school flag program?
- What Can YOU Do?
- Idling Reduction in Schools
- What Can YOU Do?
- We Can Help!

Who are CRPC and LCF?

- CRPC is a Council of Governments serving the eleven-parish Capital Region

  CRPC's mission is to foster cooperation and coordination in resolving area-wide problems beyond any individual constituency's authority or competence through planning and communication.

- LCF is member of US Department of Energy's Clean Cities Program

  LCF's mission is to improve air quality in Louisiana and advance the nation's economic, environmental, and energy security by supporting local actions to diversify transportation fuel options.

Is Ozone Good or Bad?

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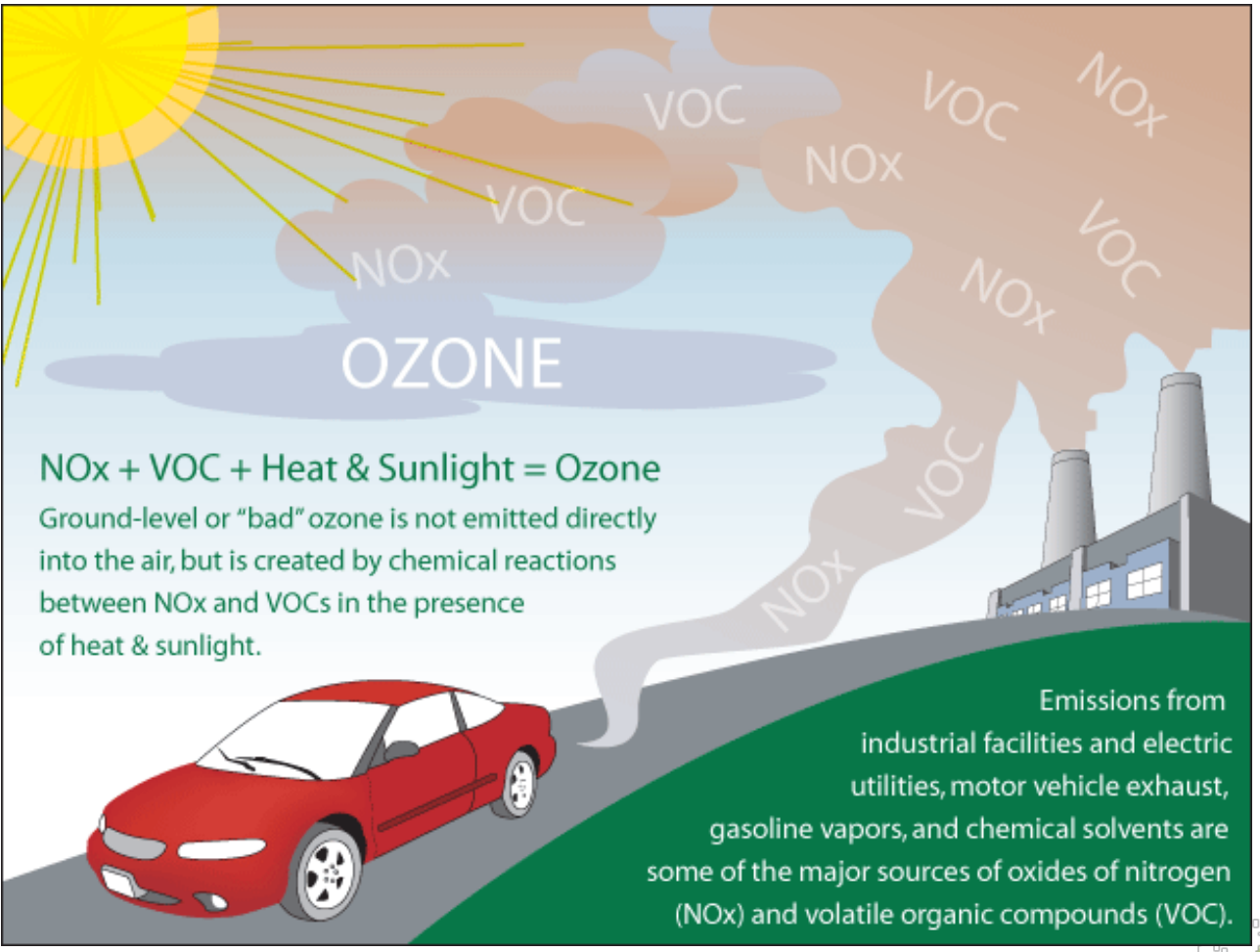
How is Ground Level ozone Formed?



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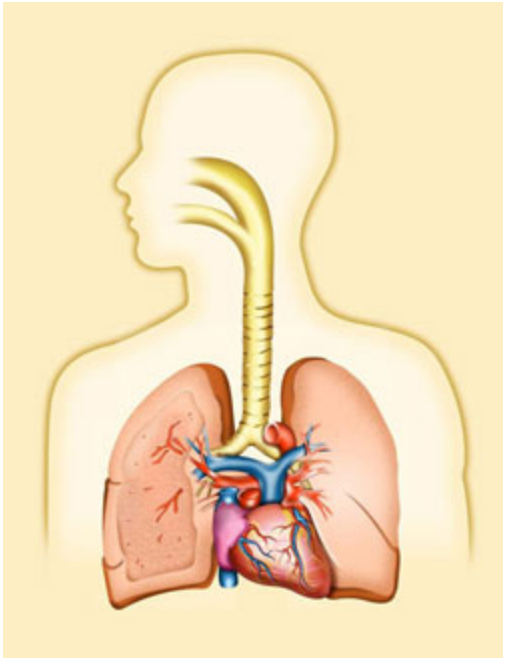
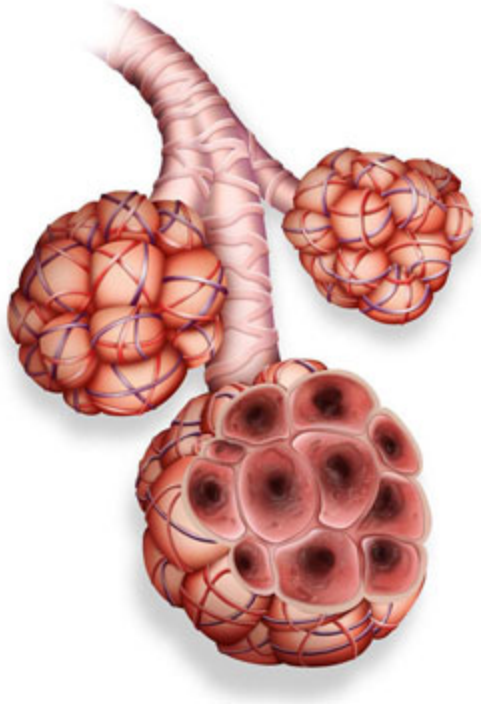
Ground Level Ozone – Health Effects?



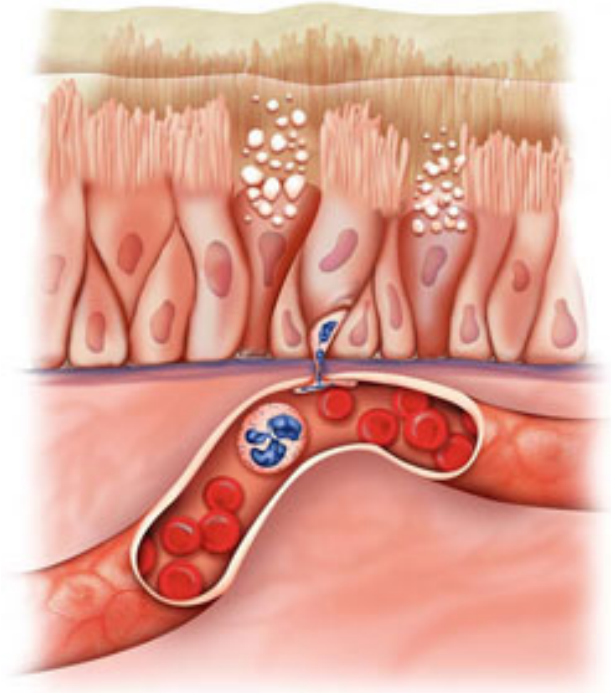
Effects on the Airways. Ozone is a powerful oxidant that can irritate the air ways causing coughing, a burning sensation, wheezing and shortness of breath and it can aggravate asthma and other lung diseases.

Ground Level Ozone – Health Effects?



Alveoli filled with trapped air. Ozone can cause the muscles in the airways to constrict, trapping air in the alveoli. This leads to wheezing and shortness of breath. In people with asthma it can result in asthma attacks.

Ground Level Ozone – Health Effects?



Airway Inflammation. With airway inflammation, there is an influx of white blood cells, increased mucous production, and fluid accumulation and retention. This causes the death and shedding of cells that line the airways and has been compared to the skin inflammation caused by sunburn.

What is the school flag program?

- Alerts schools to the local air quality forecast and enables them to take actions to protect the health of students, especially those with asthma.
- Each day a school raises a flag that corresponds to how clean or polluted the air is.
- The color of the flag matches Air Quality Index (AQI) on airnow.gov.
- On unhealthy days, schools can use this information to adjust physical activities to help reduce exposure to air pollution.

What do the colors mean?

Air Quality Index	Outdoor Activity Guidance
GOOD	Great day to be active outside!
MODERATE	Good day to be active outside! Students who are unusually sensitive to air pollution could have symptoms, so watch for coughing or shortness of breath. These are signs to take it easier.
UNHEALTHY FOR SENSITIVE GROUPS	It's OK for students to be active outside, especially for short activities such as recess and physical education (PE) class. For longer activities such as athletic practice, students should take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. Students with asthma should follow their asthma action plans and keep their quick relief medicine handy.
UNHEALTHY	For <u>all</u> outdoor activities, students should take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. Consider moving activities indoors or rescheduling. Students with asthma should follow their asthma action plans and keep their quick relief medicine handy.
VERY UNHEALTHY	Move all activities indoors or reschedule to another day.

Why was it developed?

- Create public awareness of outdoor air quality conditions so children can continue to exercise while protecting their health when air quality is in unhealthy ranges.
- Children are at greater risk from air pollution because their lungs are still developing and they breathe more air per pound of body weight than adults.
- Even when air quality is unhealthy, exercise can be continued indoors for children who have symptoms outdoors.

What can you do?

- Sign up for a daily email about the air quality forecast
- Educate the school and the community
- Raise a colored flag each day that corresponds to their local air quality forecast.
- On unhealthy days, schools can use this information to adjust physical activities to help reduce exposure to air pollution.
- Ask bus and carpool drivers to turn off their engines if parked for more than 30 seconds. (**Stop Idling!!!)**

What Is Idling?

When a vehicle is running for nonpropulsion purposes, it is idling.

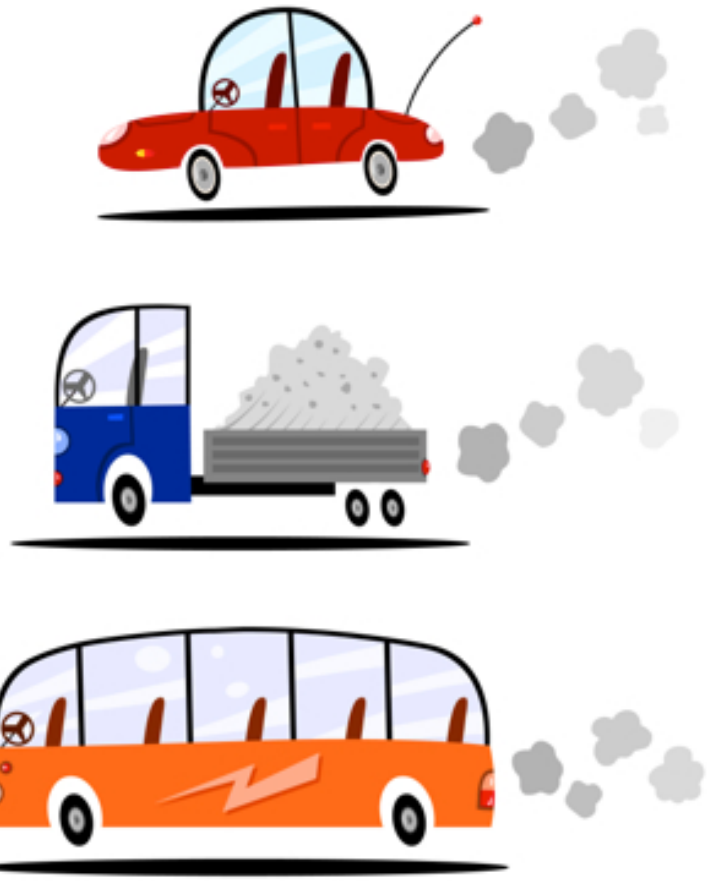
What Vehicles Idle in School Zones?

Light Duty

- Vehicles in carpool lines

Heavy Duty

- School buses



Most Idling Is Wasteful

Engine warming

•Today's vehicles warm up faster by being driven than idling

Sitting in vehicle

•During lunch breaks, to complete paperwork, to make phone calls, waiting for students

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STOP Idling.
START $aving.

Idling can seem unavoidable

Louisiana is hot.

Solution? Step out of the vehicle.

Why Care About Idling?

Idling Is Expensive.

Why Care About Idling?

Idling Is Expensive.

- Honda Civic idles for 5 minutes/day on school days.
- That's 900 minutes/year, or 15 hours.
- That's 120 "miles" of idling.

- Light Duty Idling Worksheet: http://www.transportation.anl.gov/pdfs/idling_worksheet_light-duty.pdf

Why Care About Idling?

Idling Is Expensive.

- Idle Free Utah
- 3,000 school bus drivers reduced their idling by 21 minutes per day per school bus.
- Over $300,000 in fuel savings.

- Heavy Duty Idling Worksheet: http://www.transportation.anl.gov/pdfs/TA/361.pdf

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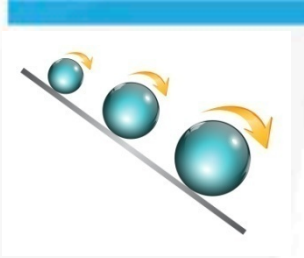
STOP Idling.
START $aving.

Why Care About Idling?

Idling Pollutes and threatens our health.

Why Care About Idling?



Idling school bus engines needlessly consumes more fuel, produces more air pollutants, and specifically endangers the health of Schoolchildren.

Idling results in incomplete fuel combustion, creating more pollutants per gallon.

Pollutants in diesel exhaust cause multiple health problems:

- **Decrease lung function**
- **Exacerbate bronchitis and pneumonia**
- **Trigger asthma**
- **Cause allergy symptoms, including inflammation and irritation of airways**
- **Identified as a possible human carcinogen and cause of premature death**

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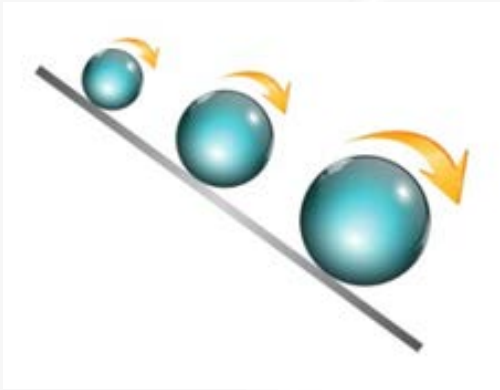
STOP Idling.
START $aving.

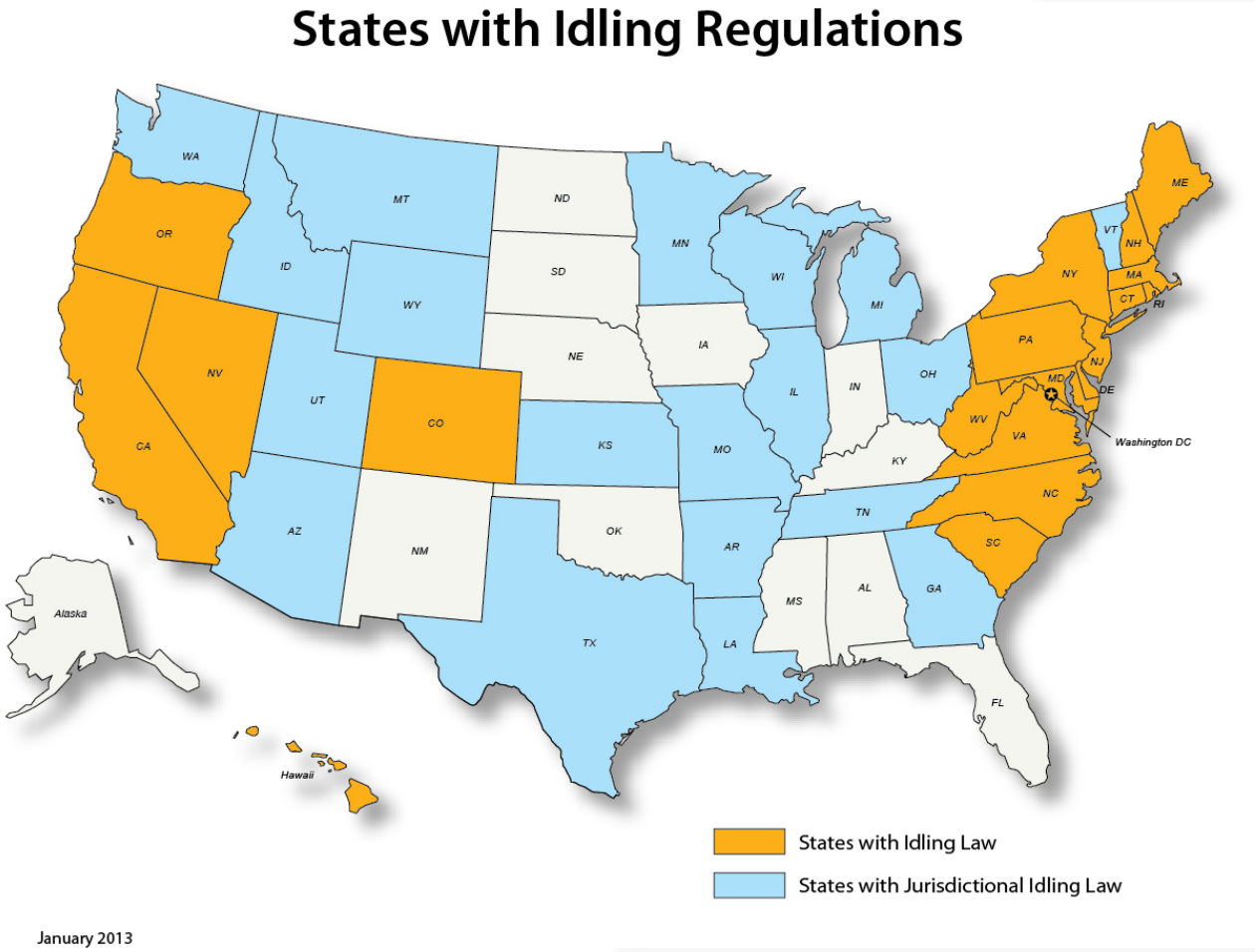
Author: Jan Mueller
Editor: Carol Werner
Environmental and Energy Study Institute

Idling Pollutes

- Each gallon of fuel burned produces about 20 pounds of carbon dioxide, a greenhouse gas.
- Nationally, 27% of greenhouse gas emissions come from transportation.
- Pollution from motor vehicles contributes to the formation of ground-level ozone.



Laws and Fines



STOP Idling. START $aving.

What Can YOU Do?

3 Steps to Idling Reduction

You Can . . .

Step 1: Be AWARE

Reducing idling saves money and protects the air.

- Turn off vehicles when not moving.
- Set policy to reduce unnecessary idling.
- Identify nonvehicle solutions when possible.

You Can . . .

Step 2: EDUCATE Drivers

Inform your drivers about idling reduction.

- Adopt an idling reduction policy
- Host an idling reduction workshop for drivers
- Post signs to remind drivers NOT to idle
- Ask drivers to make a pledge to idling reduction

STOP Idling.
START $aving.

You Can . . .

Step 3: CONSIDER Technology

Options to support your idling reduction efforts

- Engine idle management systems
- Heaters for cab and/or engine block
- Auxiliary power systems
- Electrified parking spaces

CRPC and LCF Can Help!

Provide necessary tools to you

- Slide presentation on school flag program and idling reduction
- Idling reduction cost savings calculators
- Presentation modules on technology solution

- Fact sheets, signage, and poster templates
- Pledge forms and policy templates
- Funding resources for idling reduction technologies

We Are the Solution!!!!

Thank you.

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