



Carlisle Area Health & Wellness Foundation

Adopted: March 2007

Developed by: Public Policy Committee

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Public Policy Recommendations: **Air Quality**

State Level

- Adopt diesel cleanup measures as federally-enforceable requirements in State Implementation Plans (SIPs) for the attainment of fine particulate matter and ozone air quality standards.
- Enact legislation to reduce diesel exhaust, including:
 - ◊ improved diesel retrofits
 - ◊ cleaner alternative fuels
 - ◊ crankcase ventilation systems to eliminate interior exhaust
 - ◊ engine rebuild and replacement requirements
 - ◊ truck stop electrification systems (like IdleAire)
- Enact statewide anti-idling legislation that includes enforcement.

Federal

- Promote availability of state and federal funding to support clean air technology and initiatives, including:
 - ◊ truck stop electrification systems
 - ◊ alternative clean fuels
 - ◊ retrofitting for older and off-road vehicles
- Require the EPA to adjust their standards for fine particulate matter to the level recommended by the EPA's own Clean Air Scientific Advisory Committee, and amend stationary source emissions accordingly.
- Fund and assure enforcement of the Federal Clean Air Act and oppose any weakening of its provisions.

Programmatic Recommendations

- Encourage municipalities and townships to promote diesel retrofit devices and alternative fuel programs for their fleet vehicles (for which some state and federal funding is available).
- Urge municipalities to collectively study the growth of transportation-centered businesses and diesel emissions and to collaborate on recommendations to prevent deteriorating air quality.
- Encourage trucking companies and warehouse or distribution centers to:
 - ◊ adopt anti-idling policies, including programming automatic engine shut-offs
 - ◊ regularly replace older trucks with newer models
 - ◊ purchase auxiliary power units (some state funding is available)
 - ◊ use fuel saving techniques
- Work with school districts to enact similar policies that require:
 - ◊ anti-idling and automatic shut-off of school vehicles

- ◊ purchase of diesel retrofit devices (state and federal funding is available)
- ◊ use of cleaner, alternative fuels
- Advocate that truck stops provide electrification systems and supply cleaner, alternative fuels.
- Work with the Pennsylvania Department of Environmental Protection to:
 - ◊ reduce diesel emissions
 - ◊ monitor stationary source emissions
 - ◊ promote Alternative Fuels Incentive Grant (AFIG) Program
 - ◊ ensure that the State Implementation Plans (SIPs) foster attainment of the federal fine particle and ozone standards
- Urge all levels of government to use fuel efficient vehicles in their fleets, as well as those of their contractors.

We Breathe Some of the Worst Air in the U.S.

If you are reading this in the Carlisle Area Health & Wellness Foundation's service region, you may be breathing some of the worst air in the United States. The American Lung Association places the Harrisburg/Carlisle/Lebanon area on their list of the top 25 cities that put people at risk by short term pollution.

Why? The answer is that the Carlisle region has dangerous levels of two common air pollutants: ozone - often referred to as "smog" - and fine particulate matter (PM2.5), or "soot". In fact, the United States Environmental Protection Agency (EPA) has designated south-central Pennsylvania as a non-attainment region for ozone and fine particulate air quality. Essentially, our air quality does not meet the standards for healthy air.

Air pollution is a multi-faceted problem with a variety of sources. Although the majority of ozone and particulate matter pollution is caused by large industrial facilities, in the Carlisle area the problem is significantly increased by the large number of diesel vehicles. The *Carlisle Area Air Quality Assessment Report*, a study released in February 2007 by the Foundation, noted that Cumberland County is in the bottom four percent nationally in terms of air quality and is the 13th worst of 67 counties in Pennsylvania adversely affected by diesel pollution. These designations mean that the level of fine particulate air pollution in our area is significant.

We're All at Risk – Especially Children

The Foundation's study confirmed our area's high pollutant levels and enumerated the associated health risks, especially for our communities' children, the elderly and those with pre-existing respiratory or heart disease. Many area residents were already aware of local air quality problems due largely to efforts by the Clean Air Board (CAB), a faith-based group that has worked for several years to improve the region's air quality.

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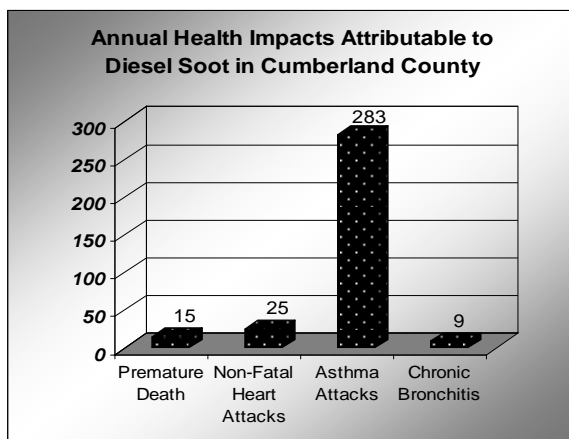
Fine particulates are easily inhaled deeply into the lungs where they can be absorbed into the bloodstream or remain embedded. In the short term, inhalation causes aggravated respiratory problems and asthma attacks. Long term effects include lung damage, increased risk of stroke and premature death. Furthermore, studies have conclusively found that particulate matter and other toxic emissions associated with diesel exhaust cause cancer. In Cumberland County, the projected average lifetime diesel soot cancer risk is 1 in 2,546. This is almost 400 times greater than the EPA's acceptable cancer level of 1 in 1,000,000. Like particulate matter, ozone causes both temporary and permanent respiratory problems, and is especially hazardous to children and those with pre-existing conditions.

The health hazards of air pollution are particularly dangerous for children. Children play outdoors and also have a higher breathing rate than adults relative to their body weight and lung surface area. Consequently, they receive a greater dose of air pollution than adults in any given time period.

What's Causing the Problem?

Although diesel emissions are a smaller percentage of total air pollution, their effects are more locally concentrated, unlike industrial emissions that disperse over a large area. Furthermore, diesel exhaust contains 41 toxic air contaminants such as benzene, formaldehyde and mercury - many of which have been linked to health disorders. For these reasons and because industrial facility emissions are best addressed by state and federal agencies, efforts to decrease diesel pollution offer more possibility for positive change at the community level.

**Annual Health Impacts Attributable to Diesel Soot
in Cumberland County, 1999**



Citation: Clean Air Task Force, "Diesel Soot Health Impacts", 2007
<<http://www.catf.us/projects/diesel/dieselhealth/county.php?c=42041&site=0>>

The Carlisle area is the home of the transportation hub known as "the Miracle Mile," a stretch of Route 11 connecting the turnpike with Interstate 81. As a result, approximately 22,400 trucks travel interstate highways in the Carlisle region daily, with about 10% stopping at local truck stops, companies, warehouses and distribution centers. Consequently, Carlisle is exposed to the diesel emissions of thousands of trucks passing through the area, and, more importantly, to the heightened emissions of idling vehicles that stop for extended periods of time in the area.

Many of Cumberland County's trucking companies and associated businesses are supportive of anti-idling and other anti-pollution measures, which could both improve air quality and reduce the companies' costs. For example, Carlisle's Petro Truck Stop offers an IdleAire system that allows truck drivers to turn off their engines and still stay comfortable during rest periods. While on the road, the most effective ways to reduce emissions are to upgrade vehicles to newer, naturally cleaner models; to retrofit diesel engines with pollution control devices; or to simply switch to cleaner alternative fuels including ultra low sulfur diesel, emulsified diesel, and biodiesel. J.W. Gleim, Inc, an excavation business in Cumberland County, has begun replacing its old diesel engines to cut down on particulate emissions. Additionally, Dickinson College is piloting a biodiesel program that outfits many of the school's vehicles with cleaner fuel produced from vegetable oil of local restaurants.

School buses can help reverse air pollution with anti-idling policies, retrofit devices and alternative clean fuels. Schools, municipalities and nonprofits are eligible for the Pennsylvania Department of the Environmental Protection's Alternative Fuel Incentive Grant, as well as some federally funded programs. In our area, the Upper Adams school district has already begun using biodiesel.

In 2005, the federal Environmental Protection Agency's (EPA) Clean Air Scientific Advisory Committee (CASAC) concluded that fine particulates inflict great harm at levels well below the current federal standards and, therefore, that existing standards for fine particulate matter fail to protect public health. The scientists recommended that new, more stringent standards be set. However, the EPA chose to disregard CASAC's proposed limits, making this the first time ever that the EPA did not take its committee's advice.

If CASAC's assessment of particulate matter and health standards is correct, Cumberland County may be at an even greater risk than previously acknowledged. If Carlisle does not meet the *current* standards for pollution levels, our area will certainly not meet the more stringent standards recommended by the EPA scientists. For the health and wellbeing of our region, industrial and diesel pollution sources must be monitored and controlled effectively.

References: American Lung Association, Carlisle Area Health & Wellness Foundation *Carlisle Area Air Quality Assessment Report*, Clean Air Task Force, United States Environment Protection Agency, Union of Concerned Scientists



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