

Reducing Diesel Particle Pollution



A Message from the Spokane Regional Clean Air Agency

According to the Washington State Department of Ecology, diesel exhaust harms health more than any other pollutant in Washington state. More than 4 million people in Washington live or work close to busy roads where diesel exhaust is at its highest. People with health conditions, such as asthma, heart disease and lung disease have more health problems when exposed to diesel exhaust. Exposure to diesel exhaust puts even healthy people at an increased risk for respiratory disease and cancer.



Who should be concerned about diesel exhaust?

We should all be concerned. People come into contact with harmful levels of diesel exhaust in both urban and rural areas, such as near a rail yard, a busy truck stop, or any place near a major road. More than four million people in Washington live and work near busy roads where diesel exhaust is most common. These people are potentially being exposed to harmful levels of diesel exhaust on a regular basis.

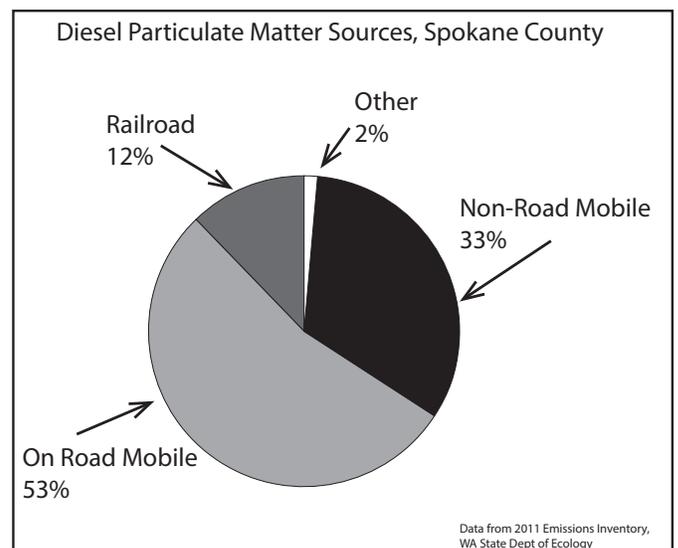
Where does diesel exhaust come from?

Diesel exhaust comes from on-road mobile sources (cars, trucks and buses) and non-road mobile sources such as farm and construction equipment. Other sources include trains and a small amount from stationary sources (diesel back-up generators, etc.) See pie chart below.

What is the concern with diesel pollution?

Diesel exhaust is made up on tiny, highly toxic particles that penetrate our lungs and remain there indefinitely to create and/or worsen both heart and lung conditions. Exposure to diesel particles is linked to immediate and long-term health effects, including:

- irritation of the eyes, nose and throat
- coughing, labored breathing, chest tightness and wheezing
- making healthy children and adults more susceptible to developing respiratory conditions
- increased risk of heart attack or stroke for those with pre-existing heart disease or circulatory problems
- lung cancer



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What has been done to reduce diesel exhaust?

Under state funding, many public fleets—including school buses, garbage trucks, transit buses, etc.—throughout Spokane County have been retrofitted with equipment to reduce emissions. These retrofits have been done mainly on pre-2007 diesel engines. Older, more polluting engines have a long life span and could continue running for many years before being replaced by new, cleaner engines. New engines (2007 and newer) are much cleaner and are not a priority for funding.

Reducing Locomotive Idling at Rail Yards

Spokane Clean Air recently partnered with Burlington Santa Fe Rail Road (BNSF) to reduce idling at the Spokane and Pasco rail yards.

BNSF is installing HOTSTART idle-reduction devices (Auxiliary Power Units) on eleven switcher engines. During cold weather locomotives idle to keep their vital fluids at operational temperatures. Rather than idle with their main engines, which use up to five gallons of diesel per hour, the power switches to the APUs, which burn about 1/2 gallon of diesel per hour. Collectively, this will save an estimated 22 tons of particulate matter pollution from being released to the air.

What else needs to be done?

The relatively easy and cost-effective retrofits have been done in our area. What's left to tackle are all the private heavy and light duty vehicles, construction and farm equipment.

Is reducing diesel exhaust worth the cost?

The benefits outweigh the costs of reducing diesel exhaust. For every dollar spent to reduce diesel emissions, we save \$3 - \$8 in health care costs and diesel fleet operating and maintenance costs, according to the California Air Resources Board. For every dollar spent on diesel retrofits, society gets back \$9 - \$16 dollars, according to the Union of Concerned Scientists.



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