

EPA Proposes New Emission Control Program

by

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“Should small engines such as lawn mowers be subject to tougher federal pollution rules?” Let us focus on the concern behind the question... Lawn mower emissions (small engines) are part of multiple sources of pollution that threaten our environment and public health. If you knew that cumulative sources of air pollution could land you in a hospital, cause severe respiratory problems, disease, and even death, then would the question become more pertinent and personal to you?

The EPA recently proposed a new emission control program that would reduce hydrocarbon emissions from small spark-ignition engines of 25 HP (19 kw) or less – including lawn and garden power equipment, and in some farm, construction and utility equipment. Why do we need such a program? The simple answer is ***small engine emissions are harmful to your health***. The American Lung Association has stated that scientific evidence overwhelmingly supports the fact that ozone and particle pollution cause serious health effects at levels previously deemed to be healthy. In fact, some “Polycyclic aromatic hydrocarbons” found in lawnmower emissions are classified as probable carcinogens by the U.S. Centers for Disease Control and Prevention.

Each year, approximately 20,000,000 small engines are sold in the U.S. Small engines are the largest single contributor to non-road hydrocarbon emissions – about one tenth of the total U.S mobile source hydrocarbon emissions. Approximately 54 million Americans mow their lawns on a weekly basis, using 800 million gallons of gas per year and producing tons of air pollutants.

Hydrocarbons and oxides of nitrogen (NOx) lead to the production of ground level ozone, the principal component of smog. Ground ozone levels, which are at the highest during hot summer months cause problems for asthmatics and aggravate other respiratory conditions. People that suffer from chronic lung or cardiovascular disease are especially at high-risk when exposed to air pollution. In recent years, diabetics were added to the high-risk category because exposure to particle pollution can affect their cardiovascular systems. Additionally, premature births, heart attacks, strokes, irregular heartbeat, and premature death are all associated with the harmful affects of particle pollution.

The Tennessee Environmental Council has posted a study synopsis on its web site (www.tectn.org) conducted in 2000 by the Clean Air Task Force. The study found 910 total hospitalizations, 27,100 asthma attacks, and 1,440 premature deaths in one year in Tennessee that resulted from air pollution induced illnesses. The American Lung Association in its “State of the Air: 2006” press release listed Knoxville-Servierville-La Follette as “*the 14th most ozone-polluted city in the nation.*”

Roger Westerholm, Ph.D., an assistant professor in the department of analytical chemistry at Stockholm University, reported that “Air pollution from cutting grass for an hour with a gasoline powered lawn mower is about the same as that from a 100 mile automobile ride...” (ENS 31may01). The report, which was the first to compare lawn mower pollution with auto mileage, recommends using catalytic converters on mowers. “One old gas powered lawn mower running for an hour emits as much pollution as driving 650 miles in a 1992 automobile.” (ENS 31may01).

When the new standards are in place, the ground ozone pollution caused by small engines will be cut by 70 percent or 350,000 tons each year. The EPA cost estimates for small engine regulation will only increase the cost of equipment by an average of \$5-\$7 per unit. However, cleaner air means less health related problems associated with air pollution, a savings to the consumer in related health care costs.

Pollution reduction tips: Owners of lawn equipment should take proactive steps to help cut emissions while improving engine performance by regularly maintaining their lawn equipment. Change the oil, air filter and spark plug in your lawn mower at the beginning of the mowing season, and sharpen the blade as needed. Each time you mow your lawn, clean the base of the mower behind the blade to remove grass, mud and debris that may clog and damage your mower, or cause the mower to run less efficiently. Fuel efficiency drops and pollution rises when general maintenance is ignored. Additionally, avoid spilling gasoline when refilling gas cans and equipment tanks. Spilled gasoline releases hydrocarbons into our air and contributes to air pollution. Storm water runoff washes toxic chemicals from gasoline into our rivers and streams causing damage to our aquatic environments, destroying aquatic life and requiring expensive purification methods to make our drinking water safe. Replace old and worn out lawn equipment with newer and more efficient units. An alternative to a gasoline-powered lawn mower is an electric lawn mower.

Finally, the issue of how to control air pollution resulting from small gasoline-powered engines is not solely the responsibility of EPA regulation. The greater issue of solving pollution problems in general begins with awareness, personal responsibility and discipline in observing and practicing good environmental stewardship for the sake of our environment and public health.