

A!ert



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Alert is a monthly update on transportation and air quality planning activities in the Delaware Valley.



Air Quality Regulations

California Passes Law Banning Gasoline Powered Lawn Equipment by 2024.

On October 9, 2021, California Governor Gavin Newsom signed a law that would require small off-road engines to be electric by 2024. These engines typically power landscaping and lawn care equipment such as lawn mowers, trimmers, and leaf blowers. The bill provides \$30 million in funding to help the lawn care industry make the transition from gasoline to electric.

"Small gas engines are not only bad for our environment and contribute to our climate crisis, but they can also cause asthma and other health issues for workers who use them," said California Assemblywoman Lorena Gonzalez, an author of the bill.

According to the California Air Resources Board (CARB), operating a gas leaf blower for an hour can create as much ozone-forming pollution as driving a Toyota Camry for 1,100 miles. The agency estimates that the state is home to some 14.4 million gas powered small off-road engines in the residential and commercial lawn equipment sector.

Nationally, U.S. Department of Transportation data shows that in 2018, Americans used nearly 3 billion gallons of gasoline running lawn and garden equipment. That's equivalent to the annual energy use of more than 3 million homes.

The move to electrify lawn equipment has been gaining momentum during the last decade. Stanley Black and Decker, a leading lawn equipment manufacturer, has reported a seventy-five percent jump in sales in electric lawn and garden equipment between 2015 and 2020. Another major manufacturer, Makita, intends to stop producing gas powered lawn equipment by March 2022.

The CARB may still delay the implementation of the law if it is deemed infeasible to implement and the U.S. Environmental Protection Agency (US EPA), must provide authorization for California to enforce the regulations for new nonroad engines, but the law is viewed as a major step to reducing this significant source of air pollution. Once the US EPA provides authorization to implement the law, the Clean Air Act allows for other states to adopt California's standards.

The landscaping industry, while recognizing that the electrification of lawn and garden equipment is inevitable, has expressed concerns that this law and similar laws across the country will result in higher costs for landscaping customers due to the increased cost of electric equipment. The National



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Applications Being Accepted

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It Pays to Plug-In
**Grant Program for Workplace
Electric Vehicle Charging
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For more information,
please

visit: drivegreen.nj.gov

**Friday
December 17, 2021**

**Deadline for Applications:
Pennsylvania DEP Alternative
Fuel Incentive Grant**

For more information,
please visit:

www.dep.pa.gov
and search "AFIG"

Association of Landscape Professionals is advocating for more time to plan for the regulation and also for more funding to help small businesses meet the law's requirements.

For more information on California's law banning gas powered lawn equipment, please visit:

www.nytimes.com/2021/10/25/opinion/leaf-blowers-california-emissions.html.



Air Quality News

Study Shows Pollution from Goods Movement Disproportionately Impacts Disadvantaged Communities

An article published by the American Geophysical Union in October, claimed that low-income neighborhoods and communities of color experience more nitrogen dioxide (NO₂) pollution than higher-income and majority-white neighborhoods in 52 urban areas across the United States. The researchers found that the disparity is driven primarily by proximity to trucking routes on major roadways, where diesel trucks are the source of NO₂ and other harmful air pollutants.

NO₂ is a common air pollutant whose primary source is the burning of fuel. NO₂ can cause a range of health problems on its own, but NO₂ is also a subset of chemicals called nitrogen oxides which are a critical component of ground-level ozone. NO₂ and ozone irritate lung tissue and can contribute to chronic respiratory illnesses.

The study tracked NO₂ pollution for two years using high resolution satellite imagery. The researchers correlated the pollutant levels with demographic data. The study's results showed that cities with bigger populations tended to have larger disparities in NO₂ pollution between low-income neighborhoods of color and higher-income white neighborhoods. The study noted that Phoenix, Los Angeles, and Newark, NJ have the highest NO₂ inequalities, showing communities of color in those cities experience over forty percent higher NO₂ exposure than the predominantly white neighborhoods.

Both passenger vehicles and heavy-duty trucks emit NO₂ and other pollutants, but diesel trucks are the dominant source of this pollutant. Heavy-duty diesel trucks can contribute up to half of a city's NO₂ pollution, on average, despite being approximately five percent or less of the vehicles on the road. Because diesel trucks also emit other harmful pollutants, such as fine particulate matter, NO₂ serves as an indicator for other kinds of transportation related air pollution.

The new study found a sixty percent drop in heavy trucking on weekends results in a forty percent decrease in air pollution exposure. These findings can help policymakers set targets for pollution reductions that can be tied to specific actions, such as transitioning the trucking fleet to cleaner or even electric heavy-duty trucks. The authors note that while emissions from diesel trucks are the biggest driver of exposure inequality, other pollution sources contribute to the problem.

Measuring air pollution at the local level is difficult to do at a scale that's useful to local policymakers. The development of high-resolution satellite technology offers near-daily pollution data at small scales, providing important quantitative information that policymakers can use to guide zoning and public health efforts.

Differences in exposure to air, water, and land pollution between communities of color and white communities are well-documented. They often stem from zoning practices that result in infrastructure, like highways and polluting industries, being built in or near communities of color and lower income areas, where environmental pollution exacerbates health disparities.

To learn more about the American Geophysical Union's findings on air pollution in urban areas, please visit: <https://news.agu.org/> and search "freight pollution".



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