

# Alert

dvrpc | July 2013

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



## Air Quality Regulations

### US EPA Proposes to Re-designate New Jersey Counties as Attainment for Fine Particulate Matter Standards

On June 27, 2013, the U.S. Environmental Protection Agency (EPA) published a proposal in the Federal Register to re-designate the New Jersey counties that previously did not meet the National Ambient Air Quality Standards (NAAQS) for fine particulate matter (PM<sub>2.5</sub>) from non-attainment status to attainment status for both the Annual and 24-Hour PM<sub>2.5</sub> Standards.

The geographic areas of the Annual and 24-Hour PM<sub>2.5</sub> Non-attainment Areas (NAAs) are identical and this proposed ruling impacts twelve counties in New Jersey. Three counties are in the Philadelphia–Wilmington PM<sub>2.5</sub> NAA and nine counties are in the New York–Northern New Jersey–Long Island PM<sub>2.5</sub> NAA. All four of the DVRPC New Jersey Counties are included in these two NAAs.

In December 2012, the New Jersey Department of Environmental Protection (DEP) submitted a re-designation request and State Implementation Plan (SIP) revision that demonstrated how the state would continue to meet the PM<sub>2.5</sub> NAAQS into the future. EPA's proposed approval of DEP's request affirms that not only is New Jersey's air quality meeting the PM<sub>2.5</sub> NAAQS but that air quality improvement is permanent and that the state has enforceable laws and regulations in place to assure future attainment of the NAAQS.

This ruling does not impact the other states in the NAAs (Pennsylvania, Delaware, New York, or Connecticut). Each state in the NAA must submit its own re-designation request and maintenance plan in order to be re-designated from non-attainment to attainment of the NAAQS.

The EPA Region II will be accepting public comment on this proposed re-designation request and maintenance plan until July 29, 2013. Should the DVRPC New Jersey counties be designated as attainment of the PM<sub>2.5</sub> NAAQS, DVRPC will still be required to demonstrate transportation conformity for those counties for an additional ten years as part of the plan to insure the continued air quality improvements.

For more information on the proposed re-designation and maintenance plan for the PM<sub>2.5</sub> NAAs in New Jersey, please visit:  
<http://www.gpo.gov/fdsys/pkg/FR-2013-06-27/html/2013-15147.htm>



## Save the Date

Thursday,  
July 18, 2013

### Southeast PA Chapter of the American Planning Association Renewable Energy Workshop

8:30 a.m. – 12:00 p.m.

*Location of Meeting:*  
DVRPC Conference Center  
8<sup>th</sup> Floor  
6<sup>th</sup> and Race Streets  
Philadelphia, PA

*Please pre-register at*  
[www.dvrpc.org](http://www.dvrpc.org)

Thursday,  
July 25, 2013

### Connections 2040 Long-Range Plan Kick-off

1:30 – 3:00 p.m.

*Location of Event:*  
Franklin Square Park  
6<sup>th</sup> and Race Streets  
Philadelphia, PA



## Air Quality Information

### Study Identifies Benefits of Urban Trees for Removing Fine Particulate Matter from Air

A March 2013 article published in the Journal *Environmental Pollution* is the first of its kind to study urban tree density and model how much fine particulate matter (PM<sub>2.5</sub>) is removed from the air by those trees. Scientists at the U.S. Department of Agriculture (USDA) Forestry Service and Davey Institute at Syracuse, New York, studied urban tree density in ten U.S. cities, including Philadelphia and New York, and modeled the PM<sub>2.5</sub> removal potential of those trees. The researchers then used the EPA's BenMAP program to quantify the health benefits of the pollutant removal and to monetize the health benefits of improved air quality.

Urban trees' potential to remove PM<sub>2.5</sub> from the air is largely dependent on the size, species, and leaf density of a tree community, as well as the wind profile and precipitation in a region. PM<sub>2.5</sub>, or fine particulate matter, will adhere to the surface of leaves on the tree. High winds will re-suspend the particles into the air, whereas rainfall and the dropping of leaves and twigs to ground remove the pollutant from the atmosphere. The researchers estimated leaf surface area by collecting and analyzing field data in random 0.1 acre plots using the I-Tree Eco model. Tree cover was then estimated by studying recent aerial photos and the two estimates were multiplied to develop a leaf index value. This data, combined with hourly climatologic records, allowed the researchers to estimate the pollutant removal potential of the trees.

In this study the researchers reviewed how trees directly remove or add fine particulate matter to the atmosphere through this mechanism and did not account for the impacts of trees on energy use (e.g. cooling from shading, providing windbreaks, etc.) or emissions of volatile organic compounds from the plants.

The total amount of PM<sub>2.5</sub> removed annually by trees in cities in the study varied from 4.7 metric tons in Syracuse to 64.5 metric tons in Atlanta with annual values ranging from \$1.1 million in health benefits in Syracuse to \$60.1 million in health benefits in New York. Removal values for Philadelphia were 12.8 tons and \$9.88 million. Health impacts were greatest in New York due to the population density while pollutant removal was greatest in Atlanta due to the high density of trees.

The significant dangers posed by PM<sub>2.5</sub> pollution, from heart disease to aggravating pulmonary disease to premature death, underscores the benefits of urban trees for the quality of life for city dwellers. According to the USDA's David Nowak, "Trees make cities healthier. While we need more research to generate better estimates, this study suggests that trees are an effective tool to reduce air pollution and create healthier urban environments."

For more information on this research, please visit: [www.nrs.fs.fed.us/news/release/urban-trees-clean-air](http://www.nrs.fs.fed.us/news/release/urban-trees-clean-air)

### Pennsylvania Extends Alternative Fuel Vehicle Rebates

On June 27, 2013 Governor Tom Corbett announced that Pennsylvania will extend the Alternative Fuel Vehicle Rebate program through 2013. The state is offering rebates of up to \$3,000 for plug-in electric hybrid vehicles and electric vehicles, \$1,000 rebates for natural gas, propane, and hydrogen fuel cell vehicles, and \$500 for electric motorcycles and scooters.

To qualify for the rebates, vehicles must be new, registered in Pennsylvania, and purchased six months before the rebate application is filed. The rebates are funded by the state's Alternative Fuel Incentive Grant program.

For more information on the rebates, please visit: [www.dep.state.pa.us](http://www.dep.state.pa.us) keyword alternative fuel vehicle rebates.



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