

# A!ert

dvrpc | April 2014

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



## Air Quality Regulations

### Study Shows That Strategies to Reduce Particulate Matter Continue to Demonstrate Benefits to National Air Quality

A recent study by Rice University researchers indicates that efforts to reduce fine particulate matter (PM<sub>2.5</sub>) pollution to meet the 1997 PM<sub>2.5</sub> National Ambient Air Quality Standards (NAAQS) were effective and continue to accrue benefits to the nation's air quality.

The researchers studied state implementation plans (SIPs) from 23 non-attainment regions across the United States that were mandated by the U.S. Environmental Protection Agency (EPA) to reduce PM<sub>2.5</sub> pollution to less than 15 micrograms per cubic meter (µg/m<sup>3</sup>) and found that all but one of the regions attained the PM<sub>2.5</sub> NAAQS by the designated attainment date of 2009. The 23<sup>rd</sup> region met the standard in 2010.

The researchers found that average PM<sub>2.5</sub> concentrations in these nonattainment areas improved by 2.6 µg/m<sup>3</sup> between the periods 2000-2004 and 2007-2009. Furthermore, these reductions were recorded across the nonattainment areas and not just at the monitors demonstrating the highest levels of PM<sub>2.5</sub> pollution.

The study authors documented that PM<sub>2.5</sub> concentrations continued to decline after 2009 and that many of the regions previously designated as nonattainment for the 1997 standard were already meeting the new 2012 PM<sub>2.5</sub> NAAQS of 12µg/m<sup>3</sup>. Lead investigator Daniel Cohan stressed that this research demonstrates that the combination of state and federal controls has been substantially improving air quality in the U.S., even for areas that meet the PM<sub>2.5</sub> NAAQS.

Cohan's study has been accepted for publication in the *Journal of the Air and Waste Management Association*.

All nine counties in the DVRPC region were designated as nonattainment for the 1997 Annual PM<sub>2.5</sub> NAAQS and all nine counties were determined to have met the NAAQS for this standard by the 2009 attainment date. The EPA is currently in the process of designating the 2012 PM<sub>2.5</sub> NAAQS nonattainment areas. The air quality monitors in the New Jersey portion of the region are reporting PM<sub>2.5</sub> concentrations below the 12 µg/m<sup>3</sup> standard and the New Jersey Department of Environmental Protection (DEP) has recommended that those counties be designated as in attainment of the 2012 PM<sub>2.5</sub> standard. In the DVRPC Pennsylvania counties, monitors in Delaware and Chester counties do not meet the new standard and the Pennsylvania DEP has recommended that those two counties be designated as a nonattainment area. EPA will finalize the designations of the 2012 PM<sub>2.5</sub> NAAQS nonattainment areas in December 2014.



## Save the Date

Saturday,  
April 19, 2014

### Clean Air Council 5K for Clean Air

Location of Event:  
Eakins Oval  
Philadelphia Museum of Art

Register at:  
[www.5krunforcleanair.org](http://www.5krunforcleanair.org)

Friday,  
April 25, 2014

### Temple University Earthfest

Location of Event  
Temple University  
Ambler Campus  
Ambler, PA

For a copy of Cohan's paper, "Modeled and Observed Fine Particulate Matter Reductions from State Attainment Demonstrations", please visit: [www.tandfonline.com](http://www.tandfonline.com) and search "Daniel Cohan". For more information about the EPA's designation of nonattainment areas for the 2012 Annual PM<sub>2.5</sub> Standard, please visit: [www.epa.gov/airquality/particlepollution/designations/2012standards/techinfo.htm](http://www.epa.gov/airquality/particlepollution/designations/2012standards/techinfo.htm).



## Air Quality Information

### Report Assesses Socio-economic and Financial Benefits of Enhanced Air Quality Data

The Center for Technology in Government (CTG) at the University of Albany has released findings of a study assessing the benefits of using NASA satellite data on PM<sub>2.5</sub> levels to enhance information being collected by the network of ground-level air quality monitors. Ground-level air quality monitors tend to be concentrated in urban areas with high population densities and in proximity to major transportation facilities. This network does not include most rural and agricultural areas in the nation. Approximately 42 million Americans live in areas without air quality monitors.

While recognizing the importance of providing information to unmonitored areas, the study authors conclude that the benefits of using this satellite data extend beyond providing information on PM<sub>2.5</sub> levels to areas without monitors. Additional benefits cited by the study authors include:

- providing information on how air quality impacts agricultural productivity,
- improving understanding of the potential impacts of industrial development and unregulated activities outside of monitored areas,
- supporting the design and implementation of the monitoring network, and
- improving regional and local analysis of air quality conditions, from microscale environments to interstate pollution transport.

Financial analysis, included in the report, estimated that by using satellite data in combination with the air quality monitoring network could provide coverage to 98.5 percent of the people living in unmonitored areas for a negligible cost because the satellites are already collecting air quality data, it is just being used in a new way. By contrast, it would take 74 new air quality monitors to provide half of the coverage at a cost of \$26 million over five years.

The study was funded by the U.S. Environmental Protection Agency, National Aeronautics and Space Administration, Sonoma Technology, and CTG. The full study and results can be viewed at [www.ctg.albany.edu/projects/pubs?proj=airnow&sub=pubs](http://www.ctg.albany.edu/projects/pubs?proj=airnow&sub=pubs)

## Air Quality Partnership

### Air Quality Education Workbooks Available from the Air Quality Partnership

The Air Quality Partnership has received an environmental education grant from the Pennsylvania Department of Environmental Protection to develop an age-appropriate educational workbook that meets the Pennsylvania Core aligned standards for the subjects of Environment and Ecology, and Health, Safety, and Physical Education for 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> graders.

The narrative of the book follows a character named Mike who cannot play at recess because of an asthma attack triggered by poor outdoor air quality. The book teaches students about the causes of air pollution and ways that communities and individuals can reduce air pollution.

The workbook and teacher resources are available for download at [www.airqualitypartnership.org/education](http://www.airqualitypartnership.org/education). Limited numbers of printed copies of the workbook can be obtained by contacting Sean Greene at [sgreene@dvrpc.org](mailto:sgreene@dvrpc.org).



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