dvrpc | February 2019

Alert

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

Air Quality Regulations

PA DEP Submits Redesignation Plan for Delaware County $PM_{2.5}$ Nonattainment Area

On January 15, 2015, the United States Environmental Protection Agency (EPA) designated Delaware County as a nonattainment area for the 2012 annual fine particle pollution ($PM_{2.5}$) standard. In December 2016, the EPA determined that Delaware County met the air quality standards for $PM_{2.5}$ and the Pennsylvania Department of Environmental Protection (DEP) is now submitting a request to EPA to change Delaware County's designation from a nonattainment to a maintenance area.

DEP released the *Redesignation Request and Maintenance Plan for the Delaware County Nonattainment Area for the 2012 Annual Fine Particulate Matter National Ambient Air Quality Standard* (NAAQS) for public comment in November 2018 and accepted comments on the request until December 13, 2018. DEP will now submit the plan to EPA for approval.

The plan, known as a State Implementation Plan or SIP, contains DEP's strategy for continuing to meet, or maintain, the $PM_{2.5}$ NAAQS for the next ten years. This strategy includes a new mobile source emissions budgets that will be used to determine transportation conformity for transportation projects in future Transportation Improvement Programs (TIPs) and the long-range plan (Plan). The budget serves as a limit for emissions from proposed transportation projects in Delaware County in the TIP and Plan.

The new mobile source emissions budgets or limits for direct $PM_{2.5}$ and $PM_{2.5}$ precursor emissions in the proposed SIP are over sixty percent lower than the previous SIP budgets. This stricter regulatory limit on emissions from transportation sources will help ensure that transportation emissions will continue to decline in Delaware County and that the county will continue to meet the $PM_{2.5}$ NAAQS into the future.

Once DEP submits this SIP revision to EPA, EPA will review the request and open a 30-day public comment period on the request before it is approved and made effective. DVRPC will be required to use the new SIP budgets to demonstrate conformity once the EPA makes the redesignation effective. This approval will probably occur in the summer of 2019.

DEP will be required to submit a second ten-year Maintenance Plan in 2029 demonstrating how Delaware County will continue to meet the NAAQS until 2039.

To learn more about the DEP's redesignation request, please visit: https://www.dep.pa.gov/Business/Air/BAQ/Regulations/Pages/Implementation.aspx.

Save the Date

Wednesday
March 6, 2019
Application Deadline for US EPA Diesel Emission Reduction Act grant

For information on the grant program, please visit: https://www.epa.gov/grants/clean-diesel-funding-assistance-program-fy-2019

Friday
May 10, 2019
Application Deadline for PA DEP Class 8 Diesel Truck and Transit Bus Grant Program

For information on the grant program, please visit: www.depgis.state.pa.us/DrivingPAForward

Air Quality News

Delaying Pavement Maintenance Boosts Emissions and Costs

According to a recent study authored by researchers at Rutgers University and published in the *International Journal of Sustainable Transportation*, maintaining road pavement saves money and energy, and reduces greenhouse gas emissions.

The researchers found that extending the life of pavement through preventive maintenance can reduce greenhouse gases by up to two percent; transportation agencies can cut spending by 10 percent to 30 percent; and drivers can save between two and five percent in fuel consumption, tire wear, vehicle repair and maintenance costs due to smoother surfaces.

The research will help transportation agencies choose appropriate maintenance strategies that consider environmental impacts in decision-making.

"When pavement is in its early failure stage, preventive maintenance can restore performance and extend pavement life with lower costs," said study lead author Hao Wang, an associate professor who focuses on infrastructure engineering in the Department of Civil and Environmental Engineering at Rutgers University-New Brunswick. "Pavement preservation leads to significant environmental benefits due to the improved surface condition, which results in smooth pavement, saves energy and reduces user costs."

The transportation sector is the largest source of greenhouse gas emissions, primarily carbon dioxide from cars, trucks and buses. The researchers used the long-term pavement performance (LTPP) database maintained by the Federal Highway Administration of the U.S. Department of Transportation to measure the environmental impact of roadway repairs, especially preserving asphalt pavement, in terms of carbon dioxide emissions linked to global warming.

The study used a full life-cycle approach to look at the carbon footprint of common ways to preserve pavement. Treatments include thin overlay (placing up to two inches of asphalt on roads), chip seal (spraying asphalt emulsion on pavement and laying aggregate), slurry seal (spreading a slurry over pavement) and crack seal (filling cracks with rubberized asphalt or polymer-modified asphalt with some filler).

The study found that thin overlay leads to the greatest overall reduction in carbon dioxide emissions (two percent) because of a large decrease in road roughness. The crack seal method led to the lowest emission reduction (0.5 percent) but all preventive maintenance methods reduce emissions overall. The researchers further developed the life-cycle assessment tool for evaluating the environmental impact of roadway projects.

More information on the environmental benefits of roadway maintenance can be found at:: https://news.rutgers.edu/keeping-roads-good-shape-reduces-greenhouse-gas-emissions-rutgers-led-study-finds/20190114#.XFmlljBKiJA.

DVRPC Study Finds that Regional Greenhouse Gas Emissions Have Decreased

DVRPC recently published a report titled *Energy Use and Greenhouse Gas Emissions Inventory for Greater Philadelphia*. The inventory shows that the equivalent of 74 million metric tons of carbon dioxide in net greenhouse gases (GHG) were emitted in the region in 2015. This reflects a 10 percent decrease in GHG emissions from 2010 levels and a 21 percent decrease from 2005 levels.

A number of factors led to the decrease in GHG emissions: a cleaner electricity grid due to the switch from coal to natural gas and an increase in renewable energy; a decrease in on-road emissions per mile traveled due to better vehicle fuel economy; and a decrease in electricity consumption per household.

The report is available for download at: https://www.dvrpc.org/EnergyClimate/.

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

DVRPC, 8th Floor
190 N. Independence Mall West
Philadelphia, PA 19106-1520
Phone: 215.592.1800 | Fax: 215.592.9125 | Web: www.dvrpc.org

DVRPC NEWS IS FUNDED THROUGH GRANTS FROM THE FEDERAL HIGHWAY ADMINISTRATION (FHWA), THE FEDERAL TRANSIT ADMINISTRATION (FTA), THE PENNSYLVANIA AND NEW JERSEY DEPARTMENTS OF TRANSPORTATION, AND DVRPC'S MEMBER GOVERNMENTS. DVRPC FULLY COMPLIES WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AND RELATED STATUTES AND REGULATIONS IN ALL PROGRAMS AND ACTIVITIES. FOR MORE INFORMATION, OR TO OBTAIN A TITLE VI COMPLAINT FORM, VIEW THE DVRPC WEBSITE, WWW.DVRPC.ORG, OR CALL 215.238.2871.