

Alert

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



Air Quality Regulations

US EPA Proposes to Change the Way Benefits are Calculated from Air Quality Regulations

On June 4, 2020, US Environmental Protection Agency (EPA) Director Andrew Wheeler, announced a proposal that would alter the process that EPA uses to calculate the costs and benefits of air pollution regulations. While this change in process may seem very technical in nature, it could have a significant impact on the creation and implementation of air quality regulations.

The proposal would require the EPA to submit all significant Clean Air Act rules to a cost-benefit analysis. The rule would limit the calculated benefits of the regulation to those pollutants that are directly controlled by the regulation. In previous administrations, ancillary or co-benefits of a rule were considered in the cost-benefit calculation.

As an example, the Obama Administration included the health benefits of reducing fine particle pollution (PM_{2.5}) that resulted from the implementation of Mercury and Air Toxics Standards Rule. Under the current proposal, only the health benefits from reducing the mercury and toxic air pollutants would be considered as a benefit of that regulation. Reductions of PM_{2.5} pollution have been included in the cost benefit analysis of a number of previous administrations' air quality regulations. PM_{2.5} serves as an easier-to-measure proxy for hazardous air pollutants. This form of accounting would decrease the benefit-to-cost ratio attributed to a regulation.

The EPA is proposing a separate accounting of public health and welfare benefits specifically tied to the portion of the Clean Air Act being used to advance the measure, when new air pollution rules are promulgated. According to a fact sheet distributed to stakeholders, under this proposal the EPA will provide the public with a clear accounting of all the data used in calculating the benefits of proposed regulations.

Manufacturers, coal, and oil companies, as well as power producers support the new plan, claiming it provides more transparency behind the purpose of the regulation. Public health advocates oppose the plan, citing the current global health crisis as a poor time to weaken regulations that protect the lung health of Americans. They argue federal regulators have a responsibility to look at all the consequences of regulation, since this broader view presents a more accurate picture of the true costs and benefits of a federal action.

To read more about EPA's "Honest Accounting Standard to Improve Future Clean Air Act Rules" please visit: www.bnnbloomberg.ca/trump-plan-could-make-air-pollution-curbs-tougher-to-justify-1.1445654



Save the Date

Wednesday
July 22, 2020

**Project Proposal Deadline
For New Jersey Volkswagen
Settlement Funding**

For information on the
funding program, please
visit:
www.state.nj.us/dep/vw/index

Friday

August 21, 2020

**Application Deadline for
DVRPC Congestion
Mitigation and Air Quality
(CMAQ) Program in NJ**

For information on the
funding program, please
visit:
www.dvrpc.org/cmaq



Air Quality News

Researchers at Duke University Use Satellite Imagery to Quantify Local Air Quality

Researchers at Duke University have developed a method for estimating the fine particulate matter (PM_{2.5}) pollution over a localized area of land using satellite imagery and weather conditions. This simplified technique could help researchers identify hidden air pollution hotspots, greatly improve studies of pollution on human health, or potentially tease out the effects of unpredictable events on air quality.

Current methods of estimating the amount of ground-level PM_{2.5} use satellites to measure how much sunlight is scattered back to space by fine particulates over the entire atmospheric column. This method, however, can suffer from regional uncertainties such as clouds and shiny surfaces, atmospheric mixing, and properties of the particles, and cannot make accurate estimates at scales smaller than about a square kilometer. Ground level monitors provide accurate PM_{2.5} measurements but they are expensive to operate and geographically dispersed, providing an incomplete picture of localized air quality.

In the study, published in the online journal *Atmospheric Environment*, the researchers used 10,400 micro-satellite images, with a three meter per pixel resolution, along with weather data to train their model to predict local levels of PM_{2.5}. They tested their resulting model on another 2,622 images for the model's ability to predict PM_{2.5}.

The researchers found that, on average, their model is accurate to within 24 percent of actual PM_{2.5} levels measured at reference stations, which is at the high end of the spectrum for these types of models, while also having a much higher spatial resolution. While most of the current standard practices can predict levels down to one million square meters, the new method is accurate down to 40,000 square meter, about the size of eight football fields placed end-to-end.

PM_{2.5} pollution poses a serious health risk causing premature deaths, and lung and heart disease as the microscopic particles can travel deep in to the lungs and even get into the blood stream. PM_{2.5} has been implicated in increasing mortality rates in COVID-19 patients due to its association with increased risk for heart and lung diseases and may play a role in the high rates of infection in minority populations living in Environmental Justice communities.

Nationally, levels of PM_{2.5} have been declining but hotspots remain around industrial areas, powerplants, and transportation centers that host high numbers of diesel powered equipment. The researchers believe that this inexpensive tool can have significant implications for identifying PM_{2.5} hotspots and prioritizing efforts to mitigate localized pollution.

To learn more about the Duke model for PM_{2.5} modelling, please visit: <https://pratt.duke.edu/about/news/air-pollution-satellites>.

Pennsylvania Department of Environmental Protection Assists Local Communities Develop Climate Action Plans

Twenty municipalities in Pennsylvania, including Narberth Borough, Caln Township, and Chester County in the DVRPC Region, are developing plans to manage the risks of climate change impacts in their communities, using tools and expertise provided by the Pennsylvania Department of Environmental Protection's (DEP) new Local Climate Action Assistance Program.

Municipal leaders entered the Local Climate Action Assistance Program last fall and were teamed up with college students for assistance in developing plan materials. The teams developed greenhouse gas emissions inventories and identified local climate hazards. The teams also conducted public meetings and online surveys to engage community members in the climate action planning process. Each team is now using a template to draft a local climate action plan to reduce emissions and manage climate change impacts.

To learn more about about the Pennsylvania Local Climate Action Assistance Program, please visit: <https://www.dep.pa.gov/Citizens/climate/Pages/PA-Climate-Action-Plan.aspx>.



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