



Air, Climate, and Energy Research News

July 2015

Sparking research innovation with Aclima/Google



Through a Cooperative Research and Development Agreement (CRADA), EPA and Aclima are advancing the development of indoor and outdoor air sensor technology. One research project, announced July 28, involves mapping air pollutants using Google Street View cars outfitted with Aclima's platform of air sensors.

[Read an EPA feature article about the partnership.](#)

[Read Aclima's news release, and watch the company's video.](#)

Indoor air and climate change grants announced



Research made possible with \$8 million in funding to universities will open the door to better understanding of the effects of climate change on indoor air quality. EPA announced the grants on July 21 at the Healthy Buildings America conference in Boulder, Colo. The recipients for these grants are:

- University of Colorado at Boulder, Boulder, Colo.
- Florida State University, Tallahassee, Fl.
- Illinois Institute of Technology, Chicago, Ill.
- Harvard University, Boston, Mass.
- Missouri University of Science and Technology, Rolla, Miss.

- Rutgers University, New Brunswick, N.J.
- Portland State University, Portland, Ore.
- University of Oregon, Eugene, Ore.
- Washington State University, Pullman, Wash.

[Learn more about the grants.](#)

Five new air monitoring methods released

Five new air monitoring methods are now available for use in evaluating air quality. EPA researchers in the Reference and Equivalent Methods program provided scientific review of the methods. They are:



- Federal Reference Method (FRM) for PM_{2.5}
- Federal Equivalent method (FEM) for PM_{2.5}
- FEM for PM_{10-2.5}
- Two FEMs for ozone

The FRMs and FEMs serve as the “gold standards” for sampling and analyzing ambient air, and the review of proposed methods is a high priority for EPA. Designated methods are listed on the [Ambient Monitoring Technical Information Center's \(AMTIC\) web page](#).

[Read the Federal Register notice about the new methods.](#)

New air sensor operating procedures ready for citizen scientists

Seven citizen science-based sensor operating procedures have been developed to provide step-by-step instructions for some of the most common air quality sensors currently on the market. In addition, a VOC Sensor Evaluation Report is now available that defines how well lower-cost volatile organic aerosol sensors, identified in a market survey, performed.



View the [operating procedures](#).
View [VOC Sensor Evaluation Report](#).

The operating procedures and other resources are available on the [Air Sensor Toolbox for Citizen Scientists web page](#).

Possible link found between air pollution and Parkinson's disease

Exposure to fine PM and ozone shows a possible link to Parkinson's disease in a study of farmers. Researchers found that farmers in North Carolina with higher estimated exposures to the air pollutants were diagnosed more often with the disease. Oxidative stress in the brain, one biological effect of PM and ozone exposure, is also associated with the development of Parkinson's. Additional research is needed to address uncertainties in the study, although it is an important step in investigating how air pollution affects rural, rather than urban, populations.



Read the paper, published in the *Journal of Occupational and Environmental Medicine*:

[Associations of Ozone and PM2.5 Concentrations with Parkinson's Disease Among Participants in the Agricultural Health Study.](#)

A screenshot of the EPA's Report on the Environment (ROE) website. At the top, there is a navigation bar with four tabs: 'Air', 'Water', 'Land', and 'Human Exposure and Health'. Below the navigation bar, there is a section titled 'What is an ROE indicator?' with a sub-header 'ROE indicators are simple measures that track the state of the environment and human health over time. Learn more >'. To the right of this text is a small image of a young girl drinking from a water bottle. Below this is a 'ROE Quick Finder' section with three columns: 'About the ROE', 'Frequent Questions', and 'Regional and State Trends'. At the bottom, there is a section titled 'What is the ROE?' with a detailed paragraph explaining the report's purpose and content.

Air and climate indicators listed in updated Report on the Environment

On July 20, EPA released an online update of the Report on the Environment that includes 85 individual indicators on air, water, land, human exposure, health and ecological condition. The report provides trends for outdoor and indoor air quality and greenhouse gases in [the air quality section](#).

Read the [Report on the Environment](#).



Science Bite Podcasts

Science Bite is a podcast series that describes the role EPA plays in advancing scientific research.

Listen to the most recent podcast:

[Clean Cookstoves Research](#)

Key Links

- [EPA's Air Research](#)
- [EPA's Climate Change Research](#)

- [Air-related blogs](#)
- [Climate-related blogs](#)
- [Energy-related blogs](#)