

NC BREATHE CONFERENCE

At the beginning of August, Clean Air Carolina disseminated the 2017 NC BREATHE Summary and Recommendations to the Office of the Governor, the environmental committees for the NC House of Representatives and NC Senate, the Department of Environmental Quality, the Division of Air Quality, the Division of Public Health and NC BREATHE participants.

Sponsored by Clean Air Carolina, Medical Advocates for Healthy Air and the Duke Environmental Health Scholars Program, the conference provided a forum for North Carolinians to share the latest research about the impacts of air pollution on human health, the environment and the economy, and to discuss the critical role policymaking plays. Funding for the conference was provided by the Fred and Alice Stanback Foundation.

Attendees at the 2017 NC BREATHE conference developed recommendations for research and policy in North Carolina. The report gives an overview of the conference proceedings and details the seven key recommendations to improve air quality research and policies in North Carolina. Recommendations include: engaging vulnerable communities in research, implementing broad-based and hyper-local air quality monitoring, and compiling a comprehensive collection of statewide health data.

The conference planning team for NC BREATHE, led by Clean Air Carolina, will continue to work with our partners, policymakers, and other stakeholders to promote these research and policy recommendations and create a framework for moving them forward. Please send your ideas to Rachel McIntosh-Kastrinsky at Rachel@CleanAirCarolina.org.

The planning team will also consider these recommendations as we design the goals and structure of the 2018 NC BREATHE Conference.



Clean Air Carolina Wins Lawsuit Against Federal Highway Administration

In a big win for climate and clean air, the Federal Highway Administration responded to a lawsuit brought by Clean Air Carolina and other environmental groups by reinstating a federal rule requiring state and local planners to account for and curb carbon pollution from cars and trucks on the national highways — a major contributor to climate change.

On July 31, the Natural Resources Defense Council, U.S. Public Interest Research Group (PIRG), and the Southern Environmental Law Center on behalf of Clean Air Carolina, sued the Federal Highway Administration for illegally suspending, earlier in the year, the federal transportation greenhouse gas rule advanced by the Highway Administration under the Obama administration.

The rule reinstatement means the Federal Highway Administration can continue working with local and state transportation agencies across the country to improve planning and hammer out smarter and more effective transportation plans to reduce greenhouse gas emissions that harm both public health and

the environment. They face a first compliance deadline of October 2018.

This summer has shown us, clearer than ever before, that the impacts of a changing climate are already upon us. This greenhouse gas rule will provide transportation planners with the tools they need to help combat vehicle pollution. Not only will this help mitigate climate change, but the reduction in local air pollution will result in better health.

North Carolina has the 2nd largest state-maintained highway system in the country with over 15,000 miles of interstate highways. The communities along these interstates will benefit from knowing how much air pollution is being generated by vehicles on those roads. The greenhouse gas rule is designed to encourage smarter, cleaner transportation options including public transportation, carpooling, and safer streets for walking and biking.

Thanks to the contributions of our supporters, Clean Air Carolina will continue to work with our partners to maintain critical regulations that protect our air quality and health.

CAC Welcomes Rachel McIntosh-Kastrinsky



Rachel serves as Manager for Medical Advocates for Healthy Air (MAHA). With experience in environmental health at the federal, state and local level, Rachel uses her passion for public health to help MAHA members advocate for healthy air in North Carolina and educate their patients about the health effects of air pollution.

Previously, Rachel worked with the National Toxicology Program, U.S. Environmental Protection Agency and the University of North Carolina on environmental health issues. Rachel received her Master of Science in Public Health from the University of North Carolina at Chapel Hill where she studied health effects of air pollution on the heart. She holds Bachelor degrees from Indiana University in Biology and Sociology.

Rachel is also committed to serving her community through STEM outreach and as a member of the Durham City-County Environmental Affairs Board.

Welcome Rachel!

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Victory for Clean Air Against Bromides

The Southern Environmental Law Center filed a legal challenge and permit comments on behalf of Clean Air Carolina and the Catawba Riverkeeper Foundation regarding Duke Energy's use of bromides to control mercury emissions at their coal plants.

Bromide discharges from Duke Energy's coal ash basins have caused carcinogens to form in downstream treated drinking water systems. Duke Energy had proposed to add even more bromides to North Carolina's air and rivers, and the Department of Environmental Quality had issued a final air permit for the Allen Steam Station and proposed air permits for the Marshall and Cliffside Steam Station facilities that would have allowed more of the bromides to enter our air and water and threaten downstream families.

Clean Air Carolina, by challenging the air permit that would have allowed Duke Energy to add more bromides

to its coal operations in violation of multiple provisions of North Carolina's environmental protection laws, has led to some surprising co-benefits for our environment.

Just a few weeks after our legal intervention in June, Duke Energy withdrew all of its requests to add more bromides at six of its coal power plants in North Carolina, including: Marshall Steam Station, Roxboro Steam Electric Plant, Belews Creek Steam Station, Mayo Electric Generating Plant, Cliffside Steam Station and Allen Steam Station. Duke Energy had been pursuing air permits to allow it to add more bromide to its coal operations since 2015.

Through Clean Air Carolina's call to action and partnerships, the use of this environmental contaminant at these locations is no longer allowed. Our work resulted in cleaner air, cleaner water, and improved health for North Carolinians.



Participants enjoyed a morning learning about ozone gardening at Clean Air Carolina's Little Sugar Creek Greenway garden in Charlotte.

Summer at Clean Air Carolina

This summer we launched our first Charlotte membership meeting with a workshop on ozone gardening. CAC's Clear the Air for Kids Program Manager, Mary Stauble, led the meeting with an overview on ozone pollution and tips for creating a bio-monitoring garden at home using ozone sensitive plants. Following Q&A, members visited our public ozone garden on the Little Sugar Creek Greenway and everyone went home with a free ozone-sensitive plant. Future membership meetings will include topics related to air quality, climate change, and actions we can all take to help build healthier communities. For details on the October meeting, sign-up for our monthly eNews at www.CleanAirCarolina.org.

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AirKeepers Program Expands Monitoring Across the State

The Clean Air Carolina team was in Durham and Wilmington recently for breakfast meetings about the AirKeepers Program and its goal of creating a monitoring network. The informal talks were a place for residents, research scientists, educators, and CAC members to learn about the initiatives and targets for the program moving forward.

A new partnership with the Durham City/County Sustainability Office was formed and three monitors will be placed around the city to measure fine particle pollution (PM2.5). University professors from NC State and UNC also now have monitors for use in Raleigh and Chapel Hill.

In addition to the monitors in the Triangle, Clean Air Carolina distributed five monitors in Wilmington to be used in the region. Dr. Bob Parr (pictured at right) has been monitoring air quality in Wilmington since March and is excited to have more AirKeepers join him.

The AirKeepers Program will re-unite with our partners at UNCC to participate in the Women Who Create freshman seminar focused on STEM learning for a second year. Clean Air Carolina upgraded the opportunity to give the young women the tools and training to set out and create their own research project over the next semester.



MAHA Advisory Board Member Dr. Bob Parr with his dog, Savvy, shows off their fixed PurpleAir monitor and mobile AirBeam sensor at their home in Wilmington

The program will expose the students to a crash course in air quality, citizen science, and research design. There will also be speakers from the STEM workforce to inspire the women to seek careers in the fast growing field. Students will use AirBeam devices to collect data, interpret the findings and produce a poster presentation on their work.

LEARN HOW YOU CAN GET INVOLVED WITH AIRKEEPERS BELOW



DONATE TO THE AIRKEEPERS PROGRAM AND SPONSOR A MONITOR

The cost for deploying one monitor for one year is \$450 which covers the cost of the monitor (and possible replacement monitor), travel expenses, installation, and technical assistance for the year. This contribution can be paid in one payment or in 10 monthly installments of \$40 and a final installment of \$50. If you are unable to help us cover the full cost of deploying one monitor, any size donation is appreciated.



CORPORATE SPONSORS ARE WELCOME

Clean Air Carolina is a 501(c)(3) nonprofit organization and encourages companies and organizations of all sizes to get involved in supporting citizen science and STEM learning by sponsoring AirKeeper locations. Contact Calvin Cupini at Calvin@cleanaircarolina.org for more information about the benefits of sponsorship.



HOST A MONITOR

If you have an outdoor location with steady power and access to WIFI, we'd like to speak with you about hosting a monitor at your site. For individuals residing in a county without a PM2.5 monitor, Clean Air Carolina may be able to deploy a monitor in your location with funds donated by sponsors.



BECOME A VOLUNTEER

AirKeeper volunteers assist at monitoring events, attend educational outreach sessions, help with the upkeep of our monitors, and represent the program at tabling events and conferences. Contact Calvin Cupini at Calvin@cleanaircarolina.org about volunteer opportunities.

Recent AQ Research

◇ Day, Drew B. et al. 2017. **Association of Ozone Exposure With Cardiorespiratory Pathophysiologic Mechanisms in Healthy Adults.** *JAMA Internal Medicine.* Duke University researchers found that short-term exposure at levels not altering lung function caused platelet activation and blood pressure increases, providing mechanistic evidence to help explain cardiopulmonary mortality from ozone exposure.

◇ Di, Qian et al. 2017. **Air Pollution and Mortality in the Medicare Population.** *New England Journal of Medicine.* The study reviewed data from more than 60 million Medicare beneficiaries and annual average PM2.5 and ozone levels over two years and found an increase of 10 micrograms per cubic meter of fine particulate matter and 10 ppb of ozone increases mortality for older adults.

◇ Silva, Raquel A. et al. 2017. **Future Global Mortality from Changes in Air Pollution Attributable to Climate Change.** *Nature Climate Change.* University of North Carolina researchers using the Atmospheric Chemistry and Climate Model Intercomparison Project ensemble and the global Representative Concentration Pathway scenarios estimate that air pollution from climate change will result in about 60,000 deaths by 2030.



EPA's new app to protect yourself from wildfire smoke is available for mobile devices.

Learn more at <http://bit.ly/2eWK5Ap>



MAHA members join The Dogwood Alliance for a press conference at the North Carolina State Legislative Building in Raleigh against the Enviva wood pellet air permit for Richmond County.

Letter Sent to Gov. Cooper to Revoke Flawed Air Quality Permit

On September 7, Clean Air Carolina sent a letter signed by 50 Medical Advocates for Healthy Air members to Governor Roy Cooper asking him to protect the health of Richmond County residents by revoking Air Quality Permit No. 10365R02 for the wood pellet facility that is proposed to be built in Hamlet, North Carolina by Enviva Pellets Hamlet, LLC.

The letter outlines the health and environmental issues Richmond County residents already face and would be exacerbated by the Enviva biomass facility. You can review the letter on www.CleanAirCarolina.org.

Gasping for Air Reviewed by MAHA Chair

A new book, *Gasping for Air: How Breathing is Killing Us and What We Can Do About It* by Kevin Glynn, MD, details how breathing can actually harm our health. Lawrence Raymond, MD, MAHA chair, calls the book, "...recommended reading for pulmonary/critical fellows, and other health professionals."

Glynn, an experienced pulmonologist, describes how air pollution and other respiratory issues are causing 300,000 Americans to die each year. The book also shows how medical science, public health and policymaking can help reduce these premature deaths.

MAHA Board Members Publish Letter About Air Quality Research and Standards

On July 24, MAHA Advisory Board members, Lawrence W. Raymond, MD, and Jeff Walden, MD, published a letter to the editor in the *News & Observer* discussing the recent studies by Di et al., 2017 and Magzamen et al., 2017 that showed the current national air pollution standards do not fully protect public health.

Raymond and Walden noted the importance of the Clean Air Act and how many lives it has saved. They concluded by asking government officials to protect public health through strong clean air policies.