

Protecting Our Air from Toxic Gas

Shortly after Clean Air Carolina and other partners submitted comments to the NC Division of Air Quality (DAQ) opposing the Tima Capital, Inc. air permit to increase the use of methyl bromide as a fumigant, the company withdrew its request and told the agency they plan to halt fumigation operations at its Wilmington facility. This is a big win for our state's air and water quality, and the health of coastal residents in New Hanover County.

According to the EPA, methyl bromide is a Hazardous Air Pollutant and known to cause neurological health effects in humans. The chemical was banned by the Montreal Protocol due to harmful effects on the ozone layer and is currently being phased out of use. The increased use of methyl bromide should not be permitted by the state DAQ for any fumigation operations in North Carolina, such as the recent request by Malec Brothers Transport, LLC.

Malec Brothers Transport, LLC has requested a new air quality permit to start a fumigation facility using methyl bromide in Columbus County, NC. Over 200 residents opposing the permit packed a public hearing organized by DAQ on May 3 to voice concerns about the public health impacts the fumigation facility would have on their community. A second hearing was held to accommodate those who did not have an opportunity to speak the first time, drawing more than 350 people. The issuance of the Malec Brothers Transport, LLC permit would put the health and well-being of Columbus County residents at risk and should be denied. To follow this and other issues we are working on, visit: CleanAirCarolina.org/Advocacy.



Powering your home with solar panels is a wise investment for you and the planet. Learn how you can save on solar through our partnership with Renewable Energy Design Group.

Go Solar with Clean Air Carolina

Clean Air Carolina has partnered with the solar energy provider Renewable Energy Design (RED) Group to help you go solar. This new partnership offers our members 10 percent off a solar installation and benefits our air quality programs and the environment.

Now is the time to go solar as multiple discounts are available to help make your installation affordable. As part of NC House Bill 589, for a limited time, Duke Energy is offering a rebate to residential, commercial, and non-profit Duke Energy and Duke Energy Progress customers who have installed a solar array this year. With the Duke Energy rebate plus a 30 percent federal tax credit, our members could potentially save nearly 50 percent off a home solar installation.

Solar makes a great impact on our environment and securely provides a 10-15 percent return on your investment. Long-time Clean Air Carolina supporter, Bob Thomason, took advantage of this offer and recently installed a 5 kilowatt (kW) panel system on his home. Bob can

expect annual utility savings to average around \$1,260 for a total savings of about \$31,500 over 25 years. He is also helping protect the environment by reducing approximately 155 tons of carbon dioxide (CO₂), a climate-changing pollutant, from our air over the system's lifetime. That is equivalent to driving 310,000 auto miles!

"The cost savings is important to me," says Bob, "but the best part is knowing I've made an investment that benefits the environment as well as reduces my carbon footprint and sets me on the path to energy independence."

Be a part of the solution and go solar with Bob and other Clean Air Carolina members. Contact RED group today at 877-520-7652 or REDgroupNC.com for a no obligation quote or to learn more about this program.

Join or renew your membership with Clean Air Carolina at: CleanAirCarolina.org/solarCAC.



Congratulations to Our 2018 Airkeeper Award Winners



Each year, Clean Air Carolina recognizes individuals and organizations working to improve air quality in North Carolina.

2018 Airkeeper Award Winners:

INDIVIDUAL

SCHOOL

Daniel Costa

Pamela Grundy

BUSINESS

ORGANIZATION

Atrium Health
Novant Health

Northwest Corridor
Neighborhoods

POLICY MAKER

MAHA

Julie Mayfield

David Hill
Kayne Darrell

To learn more about our 2018 Airkeeper Award Winners and how to nominate someone for the 2019 Airkeeper Awards, visit: CleanAirCarolina.org/Airkeeper-Awards.

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2018 NC BREATHE Conference: Air, Climate, & Community Health

In his opening remarks, H. Kim Lyerly, MD, of Duke University noted that people breathe an average of 30 pounds of air a day, but only ingest four to five pounds of water. In other words, people breathe a lot of air each day, so a little air pollution can have a large health impact. Lyerly along with his co-presenter, Julia Kravchenko, PhD, MD, then discussed the results of their study showing the economic and health benefits of clean air policies. You can review the full presentation on the NC BREATHE website.

On Thursday, March 8, academics, students, medical and health professionals, state, federal and local environmental agencies and community leaders gathered at the 2018 NC BREATHE conference sponsored by Clean Air Carolina at Wake Forest University in Winston-Salem. The conference opened with a series of keynotes considering how air quality affects human health, the environment, and the economy.

In the second keynote of the morning, Wayne Cascio, MD, of the Environmental Protection Agency (EPA) and Lauren Thie, MSPH, of the NC Division of Public Health shared their work on wildland fires in North Carolina. Thie's smoke vulnerability map was of particular interest. It showed the sensitivity to wildfire smoke and access to air quality data of different counties across NC.

The US Forest Service has been working with Thie in Hoke County to develop better ways to communicate smoke, health issues, and practical information. Bryan Hubbell, PhD, of EPA finished the morning session by discussing how to quantify the costs and benefits of air pollution and health.

After lunch, the attendees reconvened in breakout sessions to discuss how to involve vulnerable communities in research; how to improve the quality and access to air and health data; and how to include health impact analysis in policy making. While there were many takeaways from the sessions, the key outcomes were discussed during the final session with Brian Southwell, PhD.

All three breakout sessions noted the importance of citizen science and local air quality monitoring to help communities, researchers and policy makers. And it was made clear, how the data is collected and used is crucial to making the measurements useful.

To learn more about the award-winning posters, presentations, and speakers go to CleanAirCarolina.org/NCBreathe2018.

A report with outcomes from the conference is in preparation and will be available on the NC BREATHE website later this year.



Monitoring Our Air

Clean Air Carolina is establishing itself as a national leader in citizen science air monitoring by creating the first statewide air monitor network. Our goal is to have at least one monitor in all 100 NC counties by the end of the year. So far, over 50 site deployments have been completed in 30 counties.

All kinds of locations can be great sites for particulate matter sensors. Homes, churches, and businesses can serve as a host for citizen science. Our most recent public monitor installations have been at the Pisgah Astronomical Research Institute in Transylvania County, the Cherokee Nation Welcome Center in Swain County, and the Rural Empowerment Association for Community Help in Duplin County.

Can you help us deploy an air monitor in one or two of the orange counties shown in the map below? Find out how you can become part of this first-of-its-kind network! Visit us online at: CleanAirCarolina.org/AirKeepers.



Blue = monitor(s) installed
Orange = monitor needed



Celebrating Earth Day with Charlotte Neighborhood Leaders

Charlotte's Historic West End is home to many neighborhoods rich in ethnic and cultural diversity. These communities are also disproportionately affected by air pollution due to their proximity to major highways and industrial facilities. This is an environmental justice issue that impacts many communities across North Carolina. Clean Air Carolina is grateful for neighborhood leaders Ron Ross, Mattie Marshall, and William Hughes, winners of our Airkeeper Award, who are actively taking a stand against air pollution as Clean Air Carolina's first AirKeepers.

Citizen scientists Ross, Marshall, and Hughes are monitoring air quality in the Historic West End, educating residents about health

impacts associated with air pollution and working to address air quality problems they uncover.

On Earth Day, Clean Air Carolina joined the trio of neighborhood leaders as they measured hyper-local levels of fine particle pollution using portable air sensors. Johnson C. Smith University students also joined as well as leaders from two public schools. Following the monitoring sessions, the team used GPS to track their paths and map the level of particle pollution in the air online.

Thanks to our donors, we are able to foster engagements like these to raise awareness about air pollution and ways people can take action to combat its impact on their community. To learn more, visit: CleanAirCarolina.org/AirKeepers.

CAC & NC Business Team Up to Make a Difference

In April, over a dozen employees of TIAA Financial Services partnered with Clean Air Carolina for the annual EarthShare Corporate Challenge on a garden project at J.M. Morehead STEM Academy in Charlotte. It was a perfect day to work outside together and, thanks to the TIAA team, we were able to rebuild the school's ozone garden and start cleaning up the area for students. Clean Air Carolina has worked with Morehead Middle School students since 2011 when an ozone garden was first installed on campus. This special garden of ozone sensitive plants can be used as a tool to help students learn about air quality.

A proud member of EarthShare NC, we are engaging communities across the state in protecting our air and promoting solutions for a stable climate. If you or your company is interested in partnering with us, visit our website at www.CleanAirCarolina.org or contact us at 704-307-9528. You can learn more about EarthShare NC at www.EarthShareNC.org.



SAVE THE DATE

STATE OF THE AIR
MILES O'BRIEN

SEPTEMBER 27 DURHAM



Miles O'Brien is a veteran, award-winning journalist who focuses on science, technology, aerospace, and the environment. Join us for an engaging conversation moderated by Miles on climate change, air quality, and human health. Stay tuned for more details; learn more about Miles on his website at MilesOBrien.com.

Recent AQ Research

- ◇ American Lung Association. 2018. **State of the Air 2018**. The ALA found ozone pollution worsened significantly in 2014-2016 compared to the previous report, while improvements continued in year-round particle pollution and fewer episodes of high particle days. This year's report provides additional evidence that the United States must continue to fight climate change and enforce the Clean Air Act to protect the nation from unhealthy air.
- ◇ Mikati, Ihab, et al. 2018. **Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status**. American Journal of Public Health. Mikati et al., found that more blacks live near sources of air pollution than whites, which is more pronounced than are the disparities based on poverty level. The researchers reviewed emissions data from the US EPA's National Emissions Inventory and demographic data from the Census Bureau's American Community Survey to assess location of emission, race and poverty.
- ◇ Cromar, Kevin R., et al. 2018. **Estimated excess morbidity and mortality associated with air pollution above American Thoracic Society recommended standards, 2013-2015**. Annals of the American Thoracic Society. Cromar et al., noted that thousands of lives could be saved if counties met the American Thoracic Society's recommended ozone and fine particulate matter (PM_{2.5}, particles with a diameter of 2.5 microns or smaller) standards. The report noted that reducing the short-term fine particulate matter standard from the current EPA standard of 35 µg/m³ to the ATS recommended standard of 25 µg/m³ would make the greatest health impact.

Welcome Candace Allen and Karen Oles

MAHA would like to welcome Candace Allen of Ahoskie and Karen Oles of Kernersville to the MAHA Advisory Board.

Allen is a National Board for Respiratory Care Certified Respiratory Therapist and serves as a Pediatric Asthma Program Coordinator at Vidant Roanoke-Chowan Hospital in Ahoskie, North Carolina. In her role, she trains patients and their families to cope with an asthma diagnosis, provides individualized education for patients and their families regarding asthma, and informs patients about the air quality index and how it can be utilized to avoid disease triggers. Allen previously served as a Respiratory Care Practitioner at Vidant Chowan Hospital and at Vidant Cardiopulmonary Rehab. In addition to her work, Allen is an active member of the American Association for Respiratory Care, the Asthma Alliance of North Carolina, and the Association of Asthma Educators.



Candace Allen, BSAS, RRT, RCP
Jamesville

"I look forward to helping expand the MAHA educational training program," said Allen during the March MAHA Advisory Board meeting. She is excited to learn more about air quality, health and advocacy, as well as use her expertise to help MAHA reach its education goals.

Oles is a clinical pharmacist at the Northwest Community Care Network of Wake Forest Baptist Health. As part of a population-based health care model, she provides chronic disease management and consultation in a General Internal Medicine clinic that serves a largely indigent population. She was previously a faculty member at the University of North Carolina School of Pharmacy and Wake Forest University School of Medicine. She received her Doctor of Pharmacy from the State University of New York at Buffalo and her Masters degree in interdisciplinary epidemiology from Wake Forest University.



Karen Oles, PharmD, MS
Kernersville

"I am honored to be part of the organization," said Oles about joining MAHA. Oles looks forward to working with the board and helping advise MAHA from a Triad and pharmacist perspective.

The MAHA advisory board has a strong commitment to restoring clean and healthy air to North Carolina. The board guides and supports MAHA initiatives, recruiting, educating, and engaging medical and public health professionals in MAHA's air quality campaigns.

The MAHA Office has Moved to RTP

In May, Clean Air Carolina's MAHA office moved from the Midway Business Building in Chapel Hill to The Frontier in the Research Triangle Park (RTP). The new office space allows MAHA to be centrally located in the Triangle and take advantage of the many amenities and professional development opportunities offered by The Frontier and the RTP. While MAHA occupies a private office upstairs, The Frontier is a co-working space where the first floor is free for all to use. If you are in the RTP, we hope you'll stop by and say hello.